

BOROUGH OF



SUNDERLAND.

REPORT

ON THE

HEALTH AND SANITARY CONDITION
OF THE BOROUGH,

FOR THE YEAR 1880,

BY

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Sunderland :

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—
1881.

BOROUGH OF SUNDERLAND.

HEALTH COMMITTEE.

Chairman :

ALDERMAN STOREY, M.P.

Vice-Chairman :

COUNCILLOR RICKABY.

ALDERMAN BELL.

„ PRESTON.

COUNCILLOR ALCOCK.

„ ARMITAGE.

„ BRUCE.

„ CAMERON, R.

„ COATES.

„ CROSSBY.

„ ERRINGTON.

„ HANSON.

„ HIRST.

COUNCILLOR LAWSON.

„ NEWBY.

„ RICHARDSON, E.

„ RICHARDSON, S.

„ RUDLAND.

„ SMITH.

„ STILES.

„ THOMPSON.

„ WADDLE.

„ WRIGHTSON.

Meetings every alternate Thursday, at Half-past Seven p.m.

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(A) TABLE OF DEATHS in the Urban Sanitary District of Sunderland, classified according to Diseases and Ages ; and showing also the Population and BIRTHS therein during the Year ending December 31st, 1880.

DISTRICTS.	POPULATION AT ALL AGES.		Registered Births.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS IN PERSONS UNDER FIVE YEARS OF AGE.																					
	Census, 1871.	Esti- mated to middle of 1880.		At all Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup, (not spasmodic.) Whooping Cough.	Continued Fever.			Diarrhoea and Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, and Pneumonia, Pleurisy.	Heart Disease.	Injuries.			
																Typhus.	Enteric or Typhoid.	Other or Doubtful.														
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.	
SUNDERLAND EAST	..	10,686	358	237	57	64	29	7	40	40	Under 5	..	3	14	..	3	4	..	..	..	11	..	..	..	..	..	..	..	30	..	..	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 upwds.	..	..	11	..	1	..	..	2	..	2	..	..	..	..	1	..	12	25	9	9	
SUNDERLAND WEST	..	8,504	217	152	31	51	14	5	29	22	Under 5	..	6	8	1	..	2	..	..	13	..	..	..	..	..	..	..	7	22	..	..	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 upwds.	..	..	7	..	..	..	1	1	..	2	..	..	..	..	1	..	7	15	9	4	
BISHOPWEARMOUTH NORTH..	..	32,225	1402	855	240	258	81	36	133	107	Under 5	..	25	78	..	3	21	..	..	1	54	..	..	..	..	..	..	14	58	..	1	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 upwds.	..	..	44	1	..	1	3	6	2	1	..	..	1	..	1	..	61	38	41	12	
BISHOPWEARMOUTH SOUTH..	..	35,675	1360	743	205	167	64	30	156	121	Under 5	..	27	39	..	7	13	..	..	..	52	..	..	2	..	..	..	1	66	1	2	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 upwds.	..	3	31	..	..	1	2	4	5	5	..	3	1	..	3	..	56	50	39	15	
MONKWEARMOUTH	..	29,640	1035	681	190	202	59	28	111	91	Under 5	..	33	40	..	3	30	..	..	1	59	1	..	4	..	..	..	3	42	1	4	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 upwds.	..	1	33	1	..	1	2	10	..	8	..	..	..	..	2	..	47	29	38	12	
Public Institutions. {	HOUSE OF RECOVERY	..	..	6	1	3	1	..	1	..	Under 5	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 upwds.	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	THE INFIRMARY	..	..	41	..	1	7	5	23	5	Under 5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 upwds.	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	3	3	21		
	WORKHOUSE HOSPITALS..	..	..	..	186	12	5	9	8	70	82	Under 5	..	1	1	..	2	..	..	..	..	..	..	..	..	..	..	..	3	..	..	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 upwds.	..	..	1	..	1	..	7	4	..	1	..	..	1	..	1	..	22	30	2	2	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Under 5	..	95	184	1	18	70	..	..	2	189	1	..	6	..	..	..	19	221	2	8	
Total	98,797	116,730	4372	2901	736	751	264	119	563	468	5 upwds.	..	4	128	2	2	3	15	27	7	19	..	4	3	..	9	..	205	190	141	75	



(B) TABLE OF NEW CASES OF SICKNESS, coming to the knowledge of the Medical Officer of Health, during the Year 1880, in the Urban Sanitary District of Sunderland, classified according to Localities and Diseases.

NAMES OF LOCALITIES.	NEW CASES OF SICKNESS IN PERSONS BELONGING TO THE DISTRICT, DISTINGUISHING THOSE IN CHILDREN UNDER FIVE YEARS OF AGE.																		Other Diseases, such as Chicken Pox, or Pneumonia, which the Medical Officer of Health thinks well to record.
	12.	Smallpox. 13.	Measles. 14.	Scarlatina. 15.	Diphtheria. 16.	Croup, (not spasmodic.) 17.	Whooping Cough. 18.	Continued Fevers.			Diarrhoea and Dysentery. 22.	Cholera. 23.	Rheumatic Fever. 24.	Erysipelas. 25.	Pyæmia. 26.	Puerperal Fever. 27.	Ague. 28.		
								Typhus. 19.	Enteric or Typhoid. 20.	Other or Doubtful. 21.									
1. SUNDERLAND EAST	Under 5	..	9	17	..	..	1	..	..	..	18	..	..	..	..	..	..	..	..
	5 upwds.	..	5	23	..	..	..	1	..	..	15	..	..	..	..	..	..	..	..
2. SUNDERLAND WEST	Under 5	..	18	8	..	..	..	..	..	..	12	..	..	..	..	..	..	..	..
	5 upwds.	..	4	13	..	..	2	..	..	..	12	..	..	..	..	..	..	..	..
3. BISHOPWEARMOUTH SOUTH	Under 5	..	24	31	..	2	16	..	2	..	..	..	..	..	..	..	..	..	..
	5 upwds.	1	10	53	..	..	3	..	1	1	16	..	20	2	..	..	..	..	..
4. BISHOPWEARMOUTH NORTH	Under 5	..	47	95	2	..	20	..	2	..	9	..	..	..	..	..	..	..	..
	5 upwds.	..	18	93	..	..	5	2	1	..	17	..	..	..	..	..	..	..	..
5. MONKWEARMOUTH	Under 5	..	34	48	..	..	22	..	2	..	11	..	..	..	..	..	..	..	..
	5 upwds.	..	12	83	..	..	6	..	9	..	39	..	..	..	..	..	..	..	..
Total.....	Under 5	..	132	199	2	2	59	..	6	..	50	..	..	..	..	..	..	..	..
	5 upwds.	1	49	265	..	..	16	3	11	2	99	..	20	2	..	..	..	..	..

Sources of Information.

1312 in Workhouse and Workhouse
Infirmery.

1979 among Out-door Paupers.

921 as In-patients of General
Hospital.

327 as In-patients of Fever Hospital.

593 in other practice and from other
sources.



REPORT, 1880.

IN compliance with the general orders of the Local Government Board, I have to submit, for the information of the Board, and for the consideration of the Urban Sanitary Authority, my SEVENTH Annual Report on the Health and Sanitary condition of this Borough.

The population of Sunderland, estimated to the middle of the year 1880, was 116,730, and the area of the Borough, exclusive of tidal water and foreshore, was 2,768 acres, showing the density of the population to be 42 persons to an acre. This, of course, is assuming that all portions of the Borough are equally populated; but as in certain portions of Bishopwearmouth and Monkwearmouth Districts, a considerable quantity of land is not built upon, the density of population in those portions of the town, occupied by tenemented property, may be fairly estimated at not less than 50 persons to an acre; indeed, in Sunderland Parish the density of population is not less than 86 persons to an acre. It can readily be understood that as the population increases in a limited area, the mortality will also increase, and in greater proportion in tenemented than in cottage property, and more especially where diseases such as Scarlet Fever, Measles, and Whooping Cough make their appearance.

REPORT. *Population, Density, Births, Deaths, and Annual Birth and Death Rates in the Borough of Sunderland, for the Ten Years, 1871—80.*

Year.	Estimated Population.	Persons to an Acre.	Births.	Deaths.	Annual Rate per 1,000.	
					Births.	Deaths.
1871	98,797	29·9	3,996	3,601	39·9	36·5
1872	100,665	30·4	4,514	2,702	44·3	26·8
1873	102,450	31·0	4,615	2,341	44·8	22·8
1874	104,378	31·6	4,260	2,435	41·3	23·4
1875	106,342	32·2	4,509	2,385	42·5	22·4
1876	108,342	32·8	4,409	2,262	40·6	20·8
1877	110,382	33·4	4,499	2,487	40·8	22·5
1878	112,459	34·0	4,641	2,864	41·3	25·5
1879	114,575	41·4	4,486	2,507	40·0	21·8
1880	116,730	42·0	4,372	2,901	37·4	24·4

BIRTHS AND DEATHS.

During the fifty-three weeks ending Dec. 31st, 1880, 4,372 Births and 2,901 Deaths were registered in the Borough, showing an increase of Births over Deaths of 1,471. The Births represent an Annual Birth-rate of 37·4 per 1,000, and the Deaths a Death-rate of 24·4 per 1,000 of the estimated population. The Births showed a decline of 2·6 per 1,000 as compared with the Birth-rate of the previous year, whilst the Deaths showed an increase of 2·6 per 1,000. This increased mortality was due to the prevalence of Scarlet Fever throughout the year, and also to the exceptional fatality of Diarrhoea during the Autumn months, to both of which diseases reference will be made when treating of Infant Mortality.

Of the 4,372 Births registered, 2,223 were Males and 2,149 were Females. The Birth-rate of 37·4 was the lowest rate recorded during the past ten years.

In the four Registration Districts which comprise the Borough, the Birth-rate was highest in North and South Bishopwearmouth, viz., 43·5 and 38·2 per 1,000 respectively. In Monkwearmouth, it was 34·9, and in Sunderland Parish, it was so low as 30·2 per 1,000.

The greatest number of Births were registered in the second quarter of the year, namely 1,182, and the smallest number, 1,021 in the last quarter. In North Bishopwearmouth District, the Births numbered 1,402, of which 701 were Males and 701 were Females.

REPORT.

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The total number of Deaths registered during the 53 weeks ending Dec. 31st, was 2,901, of which number 1,486 were Males and 1,415 were Females, representing an Annual Death-rate of 24·4 per 1,000 as compared with Death-rates of 21·8, 25·5, 22·7, 23·6, 20·8, and 22·5 per 1,000 in the six previous years.

DEATHS.

—

Of the 2,901 Deaths, 1,486 were those of children under 5 years of age, of which number 736 were under a year old. 264 Deaths occurred between the ages of 5 and 15 ; 119 between the ages of 15 and 25 years ; 563 between 25 and 60 years of age ; and 468 were 60 years and upwards, of which 7 were between 90 and 100 years old.

Age at Death.

The Infant Mortality showed an increase of 382 Deaths, as compared with the previous year, whilst the number of Deaths of persons aged 60 years and upwards showed a decrease of 58.

The number of Deaths registered in each week during the year ranged from 38 in the week ending May 1st, to 84 in the week ending Sept. 4th.

The average age at death of children under 5 years of age, was 14 months.

The average age at death of persons aged 5 years and upwards was 44 years.

In Sunderland Parish, where the population is very dense, and most of the inhabitants are very poor, the mortality was exceptionally low—the mortality being only at the rate of 20·4 per 1,000. In the previous year, 1879, the Death-rate was only 20·0 per 1,000 ; so that this part of the Borough, judging from the Death-rate alone, would appear to be the healthiest ; but the Birth-rate was also very low, namely, only 29·8 per 1,000 ; and a low Birth-rate indicates, as a rule, a low Death-rate also. During the year, one death from Typhus Fever, and 3 from Typhoid Fever, were registered in this District, which, prior to the Improvement Bill being carried out, was one of the hot-beds of Typhus.

Mortality in Registration Districts.

REPORT.

In Bishopwearmouth North District, the number of Deaths registered, exclusive of those which occurred in the House of Recovery and the Workhouse Hospitals, all of which are situated in this District, was 855, representing a Death-rate of 26·5 per 1,000. During the year, 186 Deaths took place in the Workhouse, and 6 in the House of Recovery, which increased the Death-rate of this District to 32·4 per 1,000. Scarlet Fever and Diarrhœa were exceptionally fatal in this part of the Borough.

In Bishopwearmouth South District, 743 Deaths occurred, exclusive of those which took place in the Infirmary, representing a Death-rate of 20·8 per 1,000 of the estimated population. The Deaths in the Infirmary numbered 41, and increased the Death-rate of the District from 20·8 to 22·4 per 1,000.

In Monkwearmouth, 681 Deaths were registered, representing a Death-rate of 23·4 per 1,000, as compared with rates of 18·5, 22·0, and 20·5 per 1,000 in the years 1877, 1878, and 1879. Measles, Scarlet Fever, and Diarrhœa, were very fatal during the year.

ZYMOTIC DISEASES.

ZYMOTIC DISEASES.

The following Deaths were registered during the year, as arising from the principal forms of Infectious and Contagious Diseases, viz. :—Typhus Fever, 15 ; Typhoid Fever, 27 ; Scarlet Fever, 312 ; Measles, 99 ; Whooping Cough, 73 ; Diarrhœa, 208 ; Diphtheria, 3 ; making a total of 737, and representing a Death-rate from this class of disease of 6·3 per 1,000, as compared with rates of 3·4 and 6·4 in the years 1879 and 1878.

Mortality in Registration Districts.

In Sunderland Parish, 4 Deaths were attributed to Fever ; 40 to Scarlet Fever ; 9 to Measles ; 6 to Whooping Cough ; 28 to Diarrhœa ; and 1 to Diphtheria ; making a total of 88, and equal to a Death-rate of 4·6 per 1,000 of the estimated population.

In Bishopwearmouth North District, 10 Deaths were ascribed to Typhus Fever ; 10 to Enteric or Typhoid Fever ; 124 to Scarlet Fever ; 26 to Measles ; 22 to Whooping Cough ; 56 to Diarrhœa ; and 1 to Diphtheria ; making a total of 249, and equal to a Death-rate of 7·7 per 1,000 of the estimated population.

In Bishopwearmouth South District, 152 Deaths were registered, viz.:—Typhus Fever, 2; Enteric Fever, 4; Scarlet Fever, 75; Whooping Cough, 14; and Diarrhœa, 57; representing a Death-rate of 4·2 per 100.

In Monkwearmouth, 2 Deaths were registered from Typhus Fever; 10 from Enteric Fever; 73 from Scarlet Fever; 34 from Measles; 31 from Whooping Cough; 67 from Diarrhœa; and 1 from Diphtheria; making a total of 218, representing a Death-rate of 7·0 per 1,000.

During the year, 15 Deaths from Typhus Fever and 27 from Typhoid or Enteric Fever, were registered, making a total of 42, Typhus and Typhoid Fevers being 15 more than were registered in the previous year, with an estimated increase of population of 2,155.

During the past ten years the Deaths from Fever have been as follows:—

Years.	Deaths.	Rate per 1,000.	Years.	Deaths.	Rate per 1,000.
1871	221	2·20	1876	53	0·49
1872	106	1·00	1877	61	0·55
1873	53	0·51	1878	53	0·47
1874	53	0·50	1879	27	0·23
1875	42	0·40	1880	42	0·35

It will be observed from the above table, that the mortality from Fever has gradually decreased during the past ten years. In 1879, it was exceptionally low, owing to the small number of deaths (2) from Typhus Fever. That number, however, increased last year to 15. The winter of 1879-80 was very severe; trade in a very depressed state; and there was a large amount of distress among the working classes. Consequently, most of the cases from Typhus were traceable to poverty and destitution. The only wonder was that there were not more cases of this class of disease.

Twenty-seven Deaths were attributed to Typhoid or Enteric Fever, 10 of which occurred in Monkwearmouth. This disease was fatally prevalent at the extreme West of the Monkwearmouth Colliery District; and in my opinion was almost entirely due to the nature of the ground upon which the houses in that part of the Borough have been built—the foundations of the houses being built upon colliery refuse principally.

REPORT.

In all cases of Typhus or Enteric Fever the premises were at once visited, and careful enquiry made as to the predisposing and existing causes of the disease; the necessary means were taken to remedy any sanitary defects when found to exist, and due precautions taken to prevent the further spread of the disease.

Scarlet Fever.

Scarlet Fever was epidemic throughout the year, causing 312 deaths, 40 of which occurred in Sunderland Parish; 129 in Bishopwearmouth North District; 73 in Monkwearmouth; and 70 in Bishopwearmouth South District. Special reference is made in regard to this disease in my remarks on the Infant Mortality of the Borough.

Measles.

To Measles, which only caused 1 death in 1879, 99 deaths were ascribed, 34 of which took place in Monkwearmouth; 30 in Bishopwearmouth South; 26 in Bishopwearmouth North; and 9 only in Sunderland Parish.

Whooping Cough.

Whooping Cough was returned as the cause of death in 73 instances, being most fatal in Monkwearmouth, where 31 deaths occurred; 22 deaths were registered in Bishopwearmouth North; 14 in Bishopwearmouth South; and only 6 in Sunderland Registration District.

Diphtheria.

Three deaths only were attributed to Diphtheria, viz.:—1 in Sunderland District; 1 in Bishopwearmouth North; and 1 in Monkwearmouth. In the year 1879 10 deaths were registered as arising from this disease.

Diarrhœa.

During the year 208 deaths were referred to Diarrhœa as against 73 in the year 1879, and 204 in the year 1878; the mortality was proportionately greatest in Monkwearmouth and least in Sunderland Parish. Special reference is made to this disease on page 16.

Small-pox.

No death from Small-pox took place during the year.

LOCAL DISEASES.**Diseases of the Lungs.**

Of the 2,901 Deaths, 442 were referred to various Diseases of the Lungs, of which 226 were those of Males and 216 those of Females. Bronchitis, Pneumonia, and Pleurisy were returned as the cause of death in 411 instances, and these diseases were most prevalent in the first and fourth quarters of the year.

Of the 442 Deaths above-mentioned, 235 were those of children under 5 years of age ; 122 of whom were under a year old ; 117 were those of persons between 5 and 60 years of age ; and 90 were those of persons aged 60 years and upwards.

Of the 186 Deaths which took place in the Workhouse, 33 were ascribed to Bronchitis and Pneumonia, and in the Infirmary 6 out of 41 Deaths were referred to these diseases.

In Sunderland Parish, Diseases of the Lungs caused 28 per cent. of the deaths from all causes ; in Bishopwearmouth South, $16\frac{1}{2}$ per cent. ; in Bishopwearmouth North, 14 per cent. ; and in Monkwearmouth, 11 per cent. The percentage of deaths showed an increase in each Registration District as compared with the previous year.

Consumption was returned as the cause of 224 Deaths, of Phthisis. which 94 were Males and 130 were Females. This disease was most fatal in Bishopwearmouth North District, where the mortality was 3·0 per 1·000 of the estimated population, or when deducting the deaths that took place in the Workhouse from this disease, 2·3 per 1·000 ; Monkwearmouth, 1·7 per 1·000 ; Bishopwearmouth South, 1·6 ; and in Sunderland Parish only 1·0 per 1·000. The Mortality from this disease during the past 6 years has been as follows—

Years.	Deaths.	Percentage of Total Deaths.	Rate per 1,000.
1875	177	7	1·6
1876	221	10	2·0
1877	212	8	1·9
1878	211	8	1·8
1879	219	$8\frac{3}{4}$	1·9
1880	224	$7\frac{3}{4}$	1·9

Of the 224 Deaths in 1880, 19 were those of children under 5 years of age, 4 of whom were under a year old, 11 Deaths occurred between 5 and 10 years of age ; 6 between 10 and 15 years ; 59 between 15 and 25 years ; 26 between 25 and 30 years ; 51 between 30 and 40 years ; 27 between 40 and 50 years ; 16 between 50 and 60 ; 8 between 60 and 70 ; and 1 between 70 and 80 years ; from which it will be seen that this disease was most fatal between the age of 15 and 25 years.

REPORT.

Heart Disease.

The Deaths from Heart Disease during the year numbered 143, of which 75 were those of Males and 68 those of Females. In proportion to population, the disease was most fatal in Monkwearmouth District, and the classes of persons to whom the disease proved most fatal were Shipwrights, Seamen, Joiners, and Labourers. It will be observed, however, that the number of Females who died from this disease almost equalled the number of Males.

Diseases of the Brain and Nervous System.

Diseases of the Brain and Nervous and System proved fatal in 358 instances, 182 were those of Males and 176 those of Females. Of the total 358 Deaths, 185, or more than one-half, were those of children under 5 years of age, of whom 108 were under a year old; 79 deaths were those of persons aged 60 years and upwards. Of this class of disease Convulsions caused 136 deaths; Paralysis, 84; Inflammation of the Brain, 77; and Apoplexy, 37. Apoplexy and Paralysis were most fatal to Labourers, Seamen, Blacksmiths, Shoemakers, and Master Mariners.

Diseases of the Brain were most fatal in Bishopwearmouth North District, in which the Workhouse is situated, and in which Institution a number of deaths occur yearly from Apoplexy and Paralysis. The Mortality, however, during the year showed a decrease as compared with the previous year.

Diseases of the Digestive Organs.

One Hundred and Fifty Deaths were attributed to Disease of the Digestive Organs, of which 84 were those of Males and 66 those of Females. 33 Deaths were referred to Diseases of the Liver, and 12 to Cirrhosis of the Liver, a disease arising in most cases from intemperance. Of the 12 deaths, 9 were those of Males, and 3 were those of Females; and their occupations and conditions were as follows: Seamen's Wives, 2, Widow, 1, and Merchant's Clerk, Master Mariner, Seaman, Glassmaker, Plumber, Cabinet Maker, Ostler, Sawyer, and Shoemaker, each one.

Four deaths were attributed to the immediate effects of Alcohol, as against two in the previous year.

INFANT MORTALITY.

REPORT.

Of the 2,901 Deaths registered during the year, 1,487 were those of children under 5 years of age; 789 of whom were Males, and 698 were Females. 736 were Infants under a year old; 416 were children between the ages of 1 and 2 years; and 335 were between 2 and 5 years of age.

With the exception of that in the year 1878, the Infant Mortality was the highest recorded during the past six years; the Deaths representing a Death-rate of 12·4 per 1,000 of the estimated population, and forming nearly 51·5 per cent. of the total mortality.

The Infant Mortality of the Borough during the last 6 years has been as follows :—

Years.	Total Deaths.	Deaths under 5 years of age.	Rate per 1000 of population.	Percentage of Total Deaths.
1875	2385	1163	10·9	50·0
1876	2262	1101	10·1	49·0
1877	2487	1080	9·8	45·0
1878	2864	1537	13·7	53·0
1879	2507	1104	9·6	44·0
1880	2901	1487	12·4	50·0

The undermentioned Table shows the Infant Mortality in the several Registration Districts during the year.

Districts.	Total Deaths.	Deaths under 5 years of age.	Rate per 1000.	Percentage of Total Deaths.
East Sunderland	237	121	11·3	50·0
West Sunderland	152	82	9·6	54·0
Bishopwearmouth North	1047	519	16·1	49·5
Bishopwearmouth South	784	373	10·4	48·0
Monkwearmouth..	681	392	13·2	57·5
Total	2901	1487	12·4	51·5

The Mortality, it will be seen, was heaviest in Monkwearmouth, in which District Scarlet Fever, Measles, Diarrhoea, and Whooping Cough were fatally prevalent. The Mortality was lightest in Bishopwearmouth South—a district which includes the best and most aristocratic portions of the Borough.

REPORT.

The diseases most fatal to infant life during the year were Scarlet Fever, Measles, Diarrhœa, Whooping Cough, Atrophy and Marasmus, Diseases of the Lungs, and Convulsions.

Scarlet Fever.

This disease during the year proved fatal in 312 instances ; 184 being those of children under 5 years of age, as against 157 under the same age in 1879. Scarlet Fever is one of the diseases from which large cities and boroughs never seem to be entirely free. The records of this Borough, as far back as they can be traced, show that this town has never been entirely free in any one year from an outbreak of this disease of more or less severity.

The following Table gives the particulars during the past ten years.

Years.	Estimated Population.	Persons to an acre.	Deaths from Scarlet Fever.	Rate per 1000.	Death-rate of Borough.
1871	... 98,797	... 29·9	... 190	... 1·92	... 36·5
1872	... 100,665	... 30·4	... 114	... 1·10	... 26·8
1873	... 102,450	... 31·0	... 32	... ·37	... 22·8
1874	... 104,378	... 31·6	... 140	.. 1·35	... 23·4
1875	... 106,342	... 32·2	... 61	... ·57	... 22·4
1876	... 108,343	... 22·8	... 133	... 1·22	... 20·8
1877	.. 110,382	... 33·4	... 138	... 1·25	... 22·5
1878	... 112,459	... 34·0	.. 186	... 1·70	... 25·5
1879	... 114,575	... 41·4	... 243	... 2·10	... 21·8
1880	... 116,730	... 42·2	... 312	... 2·60	... 24·4

It will be seen from the above statement that the mortality from Scarlet Fever has steadily increased during the past five years, and the peculiarity of the epidemic of 1880 was the malignant type of the disease, and its fatal prevalence amongst children between 5 and 10 years of age.

The disease was least fatal in Sunderland Parish, and excessively so in North Bishopwearmouth and Monkwearmouth. In Bishopwearmouth South District also the disease was fatally prevalent.

As in previous years, a considerable number of the deaths were due to Dropsy, arising from Desquamative Inflammation of the Kidneys, produced by the children being exposed to severe and inclement weather during the convalescent stage of the disease.

No less the 99 deaths from Measles were registered during the year, 95 of which were those of children under 5 years of age. **REPORT.**

The mortality from this disease during the past 10 years has been as under :— **Measles.**

Years.	Deaths.	Years.	Deaths.
1871	58	1876	42
1872	50	1877	1
1873	33	1878	93
1874	60	1879	1
1875	5	1880	99

It is somewhat curious to observe that during the last six years an epidemic of Measles has occurred every other year. The immunity from the disease enjoyed one year being followed by an increased and excessive mortality in the next.

In Sunderland East District in 1880, 3 deaths only occurred from Measles ; in Sunderland West, 6 ; Bishopwearmouth North, 26 ; Bishopwearmouth South, 30 ; and in Monkwearmouth, 34.

Whooping Cough proved fatal to 73 children, viz. :—37 males and 36 females, as compared with 42 deaths in 1879, and 175 in 1878, a year in which this disease was exceptionally prevalent and fatal. **Whooping Cough.**

The mortality during the past 10 years from this disease has been as follows :—

Years.	Deaths.	Years.	Deaths.
1871	72	1876	53
1872	82	1877	63
1873	58	1878	175
1874	17	1879	42
1875	133	1880	73

During the year 1880 this disease was most prevalent and fatal in Monkwearmouth, in which 31 deaths occurred, and in Bishopwearmouth North District, where 22 deaths took place. In Sunderland Parish only 6 deaths occurred. Of the 73 deaths 18 were those of children under a year old, 30 between 1 and 2 years old, and 22 between 2 and 5 years of age, and 3 only aged 5 years and upwards.

REPORT.
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Diarrhœa.

The deaths from Diarrhœa during the year numbered 203, all of which, with the exception of 15, were those of children under 5 years of age, 112 of whom were under a year old.

In Sunderland Parish the deaths numbered 27, representing a death rate of 1·4 per 1,000 of the population. In Bishopwearmouth South there were 54 deaths, equal to a death rate of 1·2 per 1,000. In Bishopwearmouth North, 56 deaths, or a death rate of 1·8 per 1,000, and in Monkwearmouth, 66 deaths, representing a death rate of 2·3 per 1,000.

This disease, as usual, was most fatal during the Autumn months. Of the 203 deaths during the year, no less than 154 occurred during the 3 months ending the 30th of September.

The following table shows the mortality from this disease during the past 10 years—

Years.	Deaths.	Years.	Deaths.
1871	128	1876	145
1872	112	1877	82
1873	153	1878	204
1874	165	1879	73
1875	141	1880	203

The influence of temperature and rainfall as affecting the mortality from Infantile Diarrhœa during the 3 Autumn months will be seen from the following observations made during the last 6 years—

Years.	Mean Temperature of Air.	Daily range of Temperature.	Rainfall— Inches.	Deaths under 5 Years of Age.	Total Deaths.
	°	°			
1875 ...	61·06 F.	... 17·5 F.	... 10·24	... 70	... 88
1876 ...	60·05 „	.. 16·2 „	... 7·78	... 86	... 109
1877 ...	58·40 „	... 12·5 „	... 9·76	... 49	... 62
1878 ...	62·00 „	... 14·4 „	... 6·43	... 140	... 156
1879 ...	58·00 „	... 14·2 „	... 8·20	... 28	... 32
1880 ...	61·50 „	... 13·7 „	... 9·28	... 146	... 154

The evident connection between the Mortality from Diarrhœa and certain Meteorological conditions is very clearly shown in the following table, which shows the number of deaths in the thirteen weeks ending October 2nd, 1880, the mean temperature of air, mean daily range of temperature, and the rainfall.

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—
Diarrhœa.

Week ending	No. of Deaths	Age 3 Months and under.	Age 3 Months to 6 Months	Age 6 Months to 12 Months	Age 1 to 5 Years.	Age 5 Years and upwards.	Maximum Temperature	Mean Temperature of Air.	Daily Range of Temperature.	Rainfall in inches.
							F	F	F	
July 10	3	0	0	1	2	0	76·0	61·4	15·4	0·34
„ 17	3	1	0	1	0	1	71·0	58·7	8·2	1·52
„ 24	2	0	0	2	0	0	72·0	61·5	11·7	0·58
„ 31	5	2	0	3	0	0	75·0	61·1	14·0	1·09
Aug. 7	3	1	0	2	0	0	79·0	61·7	14·5	1·28
„ 14	10	4	0	4	1	1	83·0	66·2	18·8	0·09
„ 21	15	4	5	3	3	0	74·0	60·8	12·5	0·02
„ 28	16	5	4	2	5	0	71·0	61·9	11·5	0·32
Sep. 4	27	7	4	7	7	2	87·0	68·5	16·4	0·00
„ 11	24	4	2	9	9	0	83·0	63·9	18·1	0·74
„ 18	16	3	2	1	9	1	69·0	57·6	10·7	2·70
„ 25	22	2	4	4	11	1	65·0	56·4	11·7	0·48
Oct. 2	8	0	1	0	5	2	77·0	59·6	15·2	0·12
Total	154	33	22	39	52	8	75·3	61·5	13·7	9·28

It will be observed that, of the 154 Deaths which occurred during the thirteen weeks above-mentioned, that 94 were those of Infants, whose ages at death ranged from 2 weeks to 12 months ; that 52 Deaths occurred between the ages of 1 and 5 years ; and that 8 only were those of persons aged 5 years and upwards.

These figures have an important bearing upon the question of the causation of this disease, particularly when it is remembered that Diarrhœa is now included amongst the Zymotic class of Disease, such diseases being looked upon as more or less preventable in proportion to the amount of care and vigilance exercised by the Local Sanitary Authority and its officers in carrying into effect the various clauses of the Public Health Act, and seeing that all dwellings and their surroundings are kept in as cleanly and as good a Sanitary condition as possible.

REPORT.**Diseases of the Lungs.**

Of the other classes of Disease, Bronchitis and Pneumonia, &c., were most fatal to Infant life ; 227 Deaths of children under 5 years of age having been registered, viz. :—from Bronchitis, 120 ; Pneumonia, 83 ; Broncho-Pneumonia, 12 ; Congestion of the Lungs, 7 ; and Pleurisy, 5. Of the 227 Deaths, 119 were those of Infants under a year old, of which, curiously enough, 60 were Males and 59 were Females.

In proportion to population, the Mortality from these Diseases was greatest in Sunderland Parish, being equal to a Death-rate of 2·7 per 1,000 ; in Bishopwearmouth North, the rate was 1·8 per 1,000 ; Bishopwearmouth South, 1·6 per 1,000 ; and in Monkwearmouth, 1·4 per 1,000.

The above figures are only confirmatory of the remarks made in previous reports that the heavy mortality in Sunderland Parish was not to be wondered at when the character of the population, and the half-clothed condition of hundreds of poor children residing in that portion of the Borough, were taken into consideration.

Diseases of the Brain.

Next to Diseases of the Lungs, those affecting the Brain were most fatal, causing the deaths of 182 children under 5 years of age, of which 52 were ascribed to Inflammation of the Brain, and 130 to Convulsions. The last named was most fatal during the early month of infancy, during which period two-thirds of the deaths occurred.

Tubercular Diseases.

Tubercular Diseases proved fatal in 82 instances. 29 Deaths being ascribed to Tabes Mesenterica ; 19 to Consumption ; 13 to Tubercular Meningitis ; 11 to Scrofula ; and 10 to Hydrocephalus. These diseases, as might have been expected, were most fatal in Sunderland Parish, and in certain parts of North Bishopwearmouth and Monkwearmouth.

Debility.

Debility or Constitutional weakness was returned as the cause of death in 90 instances, all of which, with four exceptions, were those of Infants a few weeks old ; and Premature Birth was returned as the cause of death in 62 instances. These abnormal conditions were most fatal in Monkwearmouth District.

The mortality from Atrophy and Marasmus, or the wasting diseases of childhood, showed an increase as compared with the previous twelvemonths. During the year, 144 Deaths were registered as arising from these two causes, as against 88 in the year 1879; and it would appear that the predisposing and exciting causes favourable to the production of Diarrhœa, also had similar effects—at least in determining the fatality of the diseases under consideration, as no less than 70, or nearly one half of the whole number of deaths during the year took place in the three months, to which reference was made when treating of Diarrhœa.

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Atrophy and
Marasmus.

This coincidence induced me to make careful enquiries into the history of a number of these fatal cases, and it was found that in two particulars at least the conditions were similar, viz. : that the majority of infants who had died had been fed by the bottle, or other artificial means, and that the production or development of the diseases or abnormal constitutional condition might, with truth, be attributed to the injurious effects of this method of feeding.

The Deaths of 9 children were attributed to Violence, viz. :—
4 were overlaid, 2 died from the effects of Burns, 2 were acci-
dentally scalded to death, and one was accidentally killed. In
1879 the deaths of 6 children were ascribed to Violence, and in
1878 no less than 23.

Deaths from
Violence.

The Registrar General in his last Quarterly Report stated that the percentage of uncertified deaths rose in Sunderland from 2·2 to 7·0, and that this large proportion of uncertified causes of death called for the consideration of the Medical Officer of Health and the co-operation of the Coroners. In this particular instance, however, the increased percentage referred to was easy of explanation, arising, as it did, from the fact that a Medical Practitioner in Bishopwearmouth North District left home for some weeks, leaving his practice in charge of an unqualified Assistant, whose Certificates of Death could not, of course, be accepted by the Registrar. Medical Men exercise their own discretion in having qualified or unqualified Assistants; but when a practice is left by the principal for any length of time it is most desirable that the person left in charge should be fully qualified in every respect.

Uncertified
causes of
Death.

REPORT. Action taken during the Year for preventing the spread of Disease.

Isolation.

The following cases were removed by the Sanitary Inspectors to the House of Recovery and Union Fever Hospital during the year, viz. :—Fever, 19 cases ; Scarlet Fever, 40 ; Measles, 6 ; Erysipelas, 1 ; and Smallpox, 1—Total, 67—of which number 32 were under treatment in the Corporation Fever Hospital or House of Recovery, and 35 in the Union Fever Hospital.

The following cases of Infectious Disease were reported, or became known to me during the year, viz. :—Smallpox, 1 ; Typhus Fever, 21 ; Typhoid or Enteric Fever, 35 ; Simple Continued Fever, 16 ; Scarlet Fever, 792 ; Measles, 279 ; Diarrhœa, 198 ; Whooping Cough, 138 ; Croup, 18 ; and Diphtheria, 6—making a total of 1,504, as against 947 in the year 1879, and 1,657 in the year 1878. In all the above-named the premises were visited by the Sanitary Inspectors and myself, and all practical means taken to prevent the spread of the diseases, and to remedy any sanitary defect that was discovered.

Smallpox.

It will be observed that one case of Smallpox was under treatment in the House of Recovery, and the history of it was as follows :—On the 22nd of August, I happened accidentally to hear that there was a case of Smallpox in Meaburn Street, Hendon, and on visiting the house I found a sailor suffering from a severe attack of the confluent form of the disease. It appeared that this man had been a seaman on board the S.S. St. George, of Hull, which had left Baltimore about the 10th of July, for the Tyne, calling at Antwerp on the way, in which town Smallpox was said to be prevalent, where the vessel remained several days, during which time the sailors were allowed to go ashore. The vessel duly arrived at Tyne Dock, where the sailor referred to, landed, and came straight home to Sunderland, and the Smallpox developed itself some four or five days after his arrival. The patient was attended by a Medical Man, who informed me of the case on the day mentioned. I at once recommended his immediate removal to the House of

Recovery, which was effected with as little delay as possible, and without any guarantee for payment, as the patient had no means of paying; and it appeared to me that the question of payment was of very slight importance as compared with the urgent necessity there was of having the case thoroughly isolated, and the spread of the disease, if possible, prevented. After the patient's removal, the bed and bedding on which he had laid were taken to the beach and burnt; the clothes worn by his mother, who had been nursing him, were disinfected with Sulphurous Acid; as also was the house; after which the papers on the walls of the rooms were scraped off and burnt, and the whole house thoroughly cleansed; ceilings and passages limewashed, and the walls newly papered. These means happily proved effective, as there was no spread of the disease. The patient made a good recovery.

Typhoid Fever, as stated in a previous portion of the Report, **Typhoid Fever.** was most prevalent in the Monkwearmouth Colliery District. The first outbreak reported was in Bond Street; and on visiting and examining the premises, I found the joists and flooring of the entrance passage and front room quite damp and rotten; the joists rested upon the soil, which was quite damp; and there was no provision made for ventilation under the floors. Other houses adjoining the one referred to were also in a somewhat similar condition. Notice was served upon the owners to remedy these defects, which was at once complied with; since which time no new cases of Fever have been reported.

In April, a case of Fever was reported in Beauclerc Terrace; and on visiting the house, and testing the Drains by means of a solution of Sulphuretted Hydrogen, defective drainage was at once discovered. The owner of the property had the drain opened out, when it was found that the flanges of several of the pipes were broken off, so that there was a very easy escape for the sewer gas, which found its way into the kitchen and bedroom above it. These defects were at once remedied, and no further complaint has been made.

Two cases of Typhoid Fever were reported, in which it was stated to me by the patients, who were Miners, that they took

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In consequence of the sickness prevailing in the Western portion of the Monkwearmouth Colliery District, more particularly in Byron Street, Finsbury Street, Chilton Street, and Wallace Street, in which Typhoid Fever made its appearance every now and then, I recommended to the Health Committee that the owners of the property should be called upon to place ventilating grates beneath the floors of the houses, to which ready assent was given ; and the Monkwearmouth Colliery Company, to whom most of the property belongs, had the necessary work done immediately, without waiting for any formal notice to be served. The district has been more healthy since then, but still cases of Fever occur from time to time, and in my opinion are caused by the emanation arising from the ground upon which the houses have been built—a condition now, of course, very difficult to deal with. No doubt, however, paving and flagging of the streets will have a beneficial effect in improving the sanitary condition, when that necessary work is carried out.

**Scarlet Fever
Epidemic.**

Scarlet Fever, as has already been stated, was fatally prevalent throughout the year, and the difficulties and obstacles in the way of devising means to arrest its spread seemed insurmountable. The principal of these being the following—

1. The want on the part of the Sanitary Authority of early information of the outbreak of the disease in a house, and the consequent inability to isolate the first case appearing in a family.

2. The inability to prevent the indiscriminate inter-communication of the healthy with the sick and convalescent.

3. Children being allowed to attend school and places of public resort during the convalescent stage of the disease, and very frequently wearing the same clothes they wore during the period they were suffering from the disease.

4. Children attending School from infected houses.

5. Children being allowed to attend funerals, and even view the bodies of those who had died from the disease.

6. The transmission of infected clothing and bedding from one house to another.

Isolation, of course, is, of all others, the most desirable and effectual means of preventing the spread of infectious disease ; and although 24 cases only of Scarlet Fever were admitted into the Hospital of the Local Authority, it was not in any way due to the action on the part of the Health Committee that such Hospital was not taken advantage of to the fullest extent. In the great majority of instances, the first intimation that the disease was in a house, was the certificate of death from the Registrar, when all the mischief was done ; in fact, so difficult was it to obtain information, that a special report was made by me to the Health Committee, and forwarded by them to the Council, in which it was urged that compulsory powers should be obtained at the earliest possible opportunity, to compel Medical Men and occupiers of houses and rooms, to give immediate information to the Local Authority in every case of infectious disease coming under their knowledge. There cannot be a doubt that in hundreds of cases the disease would never have been contracted if the first case in the family had been reported, and properly isolated by removal to Hospital or otherwise.

The Town Council agreed to the recommendation made by me ; but as there was no immediate prospect of compulsory powers being obtained, it was thought that in the meantime some arrangement might be made with the Medical Men in the town to give the information required ; and it was arranged that a Meeting of the Profession should be called to receive a Deputation from the Health Committee, consisting of Alderman Storey, Councillor Rickaby, Councillor Stansfield Richardson, and myself, to consider the matter.

The Meeting was held, when 21 Medical Men were present. G. B. Morgau, Esq., in the Chair ; and after considerable discussion, the following resolutions were agreed to :—

1. “That in order to secure an uniform system of supplying information to the Medical Officer of Health, the Profession be invited to supply to him notice of the first occurrence in a house of every case

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of infectious disease ; and that in the opinion of this Meeting, it is the duty of the Profession to comply with this request : and that the Health Committee be advised to obtain compulsory powers in the next Session of Parliament, both for their own sake and for the protection of Medical Men."

2. "That a fee of 2s. 6d. be paid for each certificate forwarded to the Medical Officer of Health."

The foregoing resolutions were formally submitted for approval to the Health Committee, who made the following recommendation and report to the Council :—

"That a fee of 2s. 6d. be paid to every Medical Practitioner for each information of the first case in a house of Scarlet Fever, Diphtheria, Smallpox, Typhus or Typhoid Fever ; the arrangement to last until August, 1882, or until any earlier date on which compulsory powers have been obtained, and to be contingent on the whole of the Medical Men in the town agreeing to such terms. The information to be given immediately on the occurrence of the disease."

"That the necessary forms be furnished to the Medical Men by the Council, and that the information be sent direct to the Medical Officer of Health."

"The Committee also report that they have recently had a Meeting with the Medical Profession of the town with reference to the House of Recovery, who, with one exception, expressed themselves as satisfied with its management ;—the difficulty being not in the Hospital itself, but in the strong reluctance parents and guardians entertain to having their children removed from home."

The recommendations of the Committee were agreed to by the Council, but in consequence of two or three Members of the Profession declining to give any information whatever, the proposal has not been carried out ; so that nothing can now be done until compulsory powers are obtained. It is only right to state that several Practitioners expressed their readiness to give every information if all did likewise, and a few promised to give the information, but declined to receive any fee for so doing.

With regard to the other difficulties mentioned, there appears but little necessity to dwell upon them : neither is it needful to give instances to illustrate their reality. Happily, as regards the spread of disease through Schools, the Government Educational Department have made a move in the matter ; and it may reasonably be expected that such provisions will be made as will

prevent children, recovering from infectious disease, or living in an infected house, from attending School regularly, or even in order to undergo an examination, or make up attendances ; and that such compulsory absence shall not affect in any way the emoluments of the Teachers, or the grant made to the Schools.

In concluding these remarks upon Scarlet Fever, there is one thing that must be mentioned, and that is the extreme value of fumigation by Sulphurous Acid, of the rooms and clothing infected by the Scarlatina poison. In many instances, where the disease appeared, and the patients were at once removed, and the premises and clothes disinfected in the manner described, no further outbreak of the disease occurred. If this means of disinfection had been more generally employed, and at the right time, the ravages of this disease would have been very much curtailed.

The excessive Infantile Mortality, particularly in the Autumn **Summer** months, engaged the serious attention of the Health Committee **Diarrhoea.** and its Officials. In treating of the high mortality from Diarrhoea in my remarks on Vital Statistics, I referred more particularly to the influence of Meteorological conditions as affecting the prevalence and fatality of this disease—conditions over which, of course, a Sanitary Authority can have no control whatever ; but the question naturally arises, whether there was no other influence at work which might be considered as the principal factor in bringing about so heavy a mortality, and particularly in children under a year old ; and the results of the enquiry made respecting the feeding of Infants, showed that out of 112 deaths of children under twelvemonths old, 10 only were found to have been nursed by the mother, the remainder having been artificially fed by means of the bottle. This method of feeding, to the pernicious effects of which reference has from year to year been made in my reports, has become a practice adopted in all large towns, more or less, and with the most fatal results. Under the most favourable circumstances, it is a practice fraught with danger to young children, and certainly ought not to be resorted to unless under specially exceptional circumstances. It being apparent that much carelessness and

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ignorance were displayed by parents and guardians in the rearing of young children, I recommended the Health Committee to authorize me to draw up a series of recommendations and suggestions as to the feeding of children, have them printed as small hand-bills, and circulated through the poorer districts of the Borough. The Health Committee, whilst cordially approving of this recommendation, thought that it would be desirable, before such instructions were issued, to consult the Medical Men in the town, and ascertain whether they had any objection to the course suggested. A Meeting of the Profession was accordingly held, when a resolution was unanimously passed approving of the proposal, and requesting that the Medical Officer of Health should draw up a series of instructions as to the care of children, and submit them for consideration at a future Meeting of the Profession. This was done, and the following is a copy of the Instructions, printed and circulated throughout the Borough :—

BOROUGH OF SUNDERLAND.—HEALTH DEPARTMENT.

HOW TO BRING UP CHILDREN.

1. Keep them warm. Let the clothing be warm, but not tight. Children should wear stockings nearly up to the knees, and frocks well up to the neck. Give them plenty of fresh air; and take them out whenever the weather is warm. Wash the child all over with warm water daily. If possible, let the child sleep in a cot by itself. Keep the rooms of the house as clean as possible, and open the windows top and bottom at least twice a day.

FOOD.

2. If possible, every mother should suckle her child, and give it no other food till it is seven months' old. If the mother has but little milk, let the child have it; and in addition milk mixed as directed in Rule 4.

3. Except when ordered by a doctor, do not on any account give the child any baked flour, arrowroot, corn flour, biscuits, tops and bottoms, or any so-called infants food, before it is seven months' old.

4. If the child must be brought up entirely by hand, it should be fed with warm milk and water out of a bottle. The best kind of bottle is the old-fashioned straight one, with a calve's or Indian rubber teat, and without any tube whatever, it being almost impossible to prevent the corks and tubes of the new-fashioned bottles from becoming foul

and turning the milk sour. When the child has finished its meal, the bottle must be rinsed and placed in clean water in which a little soda has been dissolved, and then rinsed with water and a few tea leaves. On no account must the milk that remains after the child has finished be used again; a fresh quantity must be prepared. If fresh cow's milk be used, give two parts of milk to one of water during the first month, and afterwards three parts of milk to one of water, and sweeten with lump sugar. If milk and water is not well digested, try barley water instead of water. When the child is six months' old, the milk may be given alone. In Summer time it is well to boil the milk before using.

5. When the child has reached the age of seven months, it should have one or two meals a day of milk thickened with Chapman's entire wheaten flour, Ridge's food, Neave's food, Corn flour, Savory & Moore's food, or powdered Robb's biscuits may be used. The other meals should be of milk only. The amount of the foods used may be increased as the child grows older. At eight months the child may have broth or beef tea in addition to the milk. Children should be weaned at from nine to twelve months; if suckled longer, the health of both mother and child will suffer. At twelve months' old give an egg or a little milk pudding. At eighteen months give a little meat every day, scraped or pounded into soft pulp, with the crumb of bread and gravy. Alcoholic liquors of any kind should never be given to children. Always give children milk instead of tea, and don't give them just what the parents have, until they are more than two years' old. On no account give babies teething powders and soothing syrups; Godfrey's cordial, Steedman's powders, Daffy's Elixir: Winslow's soothing syrups ought not to be given.

The above instructions are issued for the guidance of parents and guardians, with the full consent and approval of the Medical Profession in the Borough,

HENRY J. YELD, M.D.,

Medical Officer of Health.

The Epidemic of Measles commenced in February, and continued fatally prevalent for six months, when it disappeared almost as suddenly as it came. The mortality was greatest in the months of May and June, during which period 57 deaths were registered out of a total of 99 which occurred during the whole year. Every practical means was taken to arrest the spread of this disease, and with the authority of the Health Committee, a circular was sent by me to the proprietors and Masters and Mistresses of Schools, to the following effect:—

**Measles
Epidemic.**

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BOROUGH OF SUNDERLAND.—HEALTH DEPARTMENT.

I desire to call your attention to the fatal prevalence of Measles, which is now epidemic in this Borough, and to ask you in your own interests, and also in those of the public health, to be extremely careful and not allow scholars who have had this disease to return to school until a certificate is received from a Medical Man, stating that it is safe for them to do so. Neither to allow scholars to attend school from infected houses.

There appears to be an impression prevailing amongst all classes of society that Measles is a disease of but little importance, and does not require the same precautions to be taken against its spreading as Scarlet Fever requires, and as a natural consequence of such false impression, a considerable amount of carelessness and negligence is manifested by parents and guardians in regard to it. I may mention that in the year 1874-76 and 78, when the town was suffering from similar epidemics, the deaths numbered 59, 42, and 93 respectively, and up to the end of May of the present year no less than 47 deaths have been registered from this cause alone, from which it will be seen that it is absolutely necessary that every available means should be taken to prevent, as far as practicable, the spread of a disease highly contagious and infectious in its character, and very fatal in its results. I have also to bring under your notice a practice which is being adopted in some of the elementary schools of sending pupil teachers and senior scholars to enquire after absentees from school. I need scarcely point out that in the carrying out of such a practice when there is an epidemic of Scarlet Fever or Measles in the town, there is great danger of such young persons being unwittingly sent to houses and rooms where such infectious diseases exist, and so contracting the disease and conveying it to other members of their families. Instances of this kind have been reported to me, and by me to the Health Committee, who authorised me to communicate with the various schools on the subject, so that due precautions may be taken to prevent a recurrence of such cases.

The only cases of Measles removed to the House of Recovery, were from the Barracks and a Ladies' Boarding School, and in both instances the removal was effectual in preventing the spread of the disease.

Itch.

In consequence of a letter received from Mr. Culley, the Local Government Inspector for this District, stating that "Itch" was prevalent amongst vagrants, and that from letters he had received, the Common Lodging Houses of the District were infested with

the disease, Inspector McKay and myself made a night inspection of the 35 Common Lodging Houses under the supervision of the Sanitary Authority, and made careful enquiries as to any tramps who had recently come into the town. We found that during 4 months 7 cases of Itch had been reported and sent into the Union Hospital for treatment ; of these 5 were tramps, and were only in the Lodging Houses for a few hours when the keeper found out they were suffering from the disease, and reported them at once ; the other two persons affected appear to have taken the disease from one of the before mentioned. At the time of our inspection, there was no case in any of the houses, all of which were in a very cleanly condition. Strict instructions, however, were given to the several Lodging-house Keepers to question very closely any tramp that might apply for admission, and immediately report any case that came to their knowledge, to the Inspectors or myself.

Notices were served upon the occupiers of all premises wherein there had been infectious disease, to cleanse and disinfect the same ; no less than 739 such notices having been served during the year. In 89 instances the rooms and dwellings were disinfected by one of the Sanitary Inspectors. It is satisfactory to find that more advantage has been taken this year in obtaining the services of the Inspectors to carry out this important work than in any previous year. For disinfection to have any good effect, it is necessary that it should be thoroughly done ; if not, the disease is very apt to re-appear.

**Disinfection
and Cleansing
of Rooms and
Dwellings.**

Twice during the year notices were served upon a considerable number of persons to lime-wash and cleanse rooms, passages, and outbuildings. In consequence of Scarlet Fever being so prevalent, no less than 2,638 such notices were served ; the lime and brushes required for complying with these notices were, in the case of the very poor, supplied gratuitously, and those in better circumstances were enabled to buy lime at any of the Corporation depots. Fifty tons of lime were used during the year for carrying out this work alone.

Limewashing.

A quantity of clothing and bedding was disinfected in the Chamber provided for that purpose at the House of Recovery ;

**Disinfection
and Destruction
of Bedding, &c.**

REPORT. but in 24 instances the bedding was in such a condition as to be unfit for disinfection, and was destroyed by burning. The articles burnt in most cases being replaced at the cost of the Local Authority.

Vaccination. The Vaccination Acts, from a statement appended to this Report, appear to be carefully and judiciously carried out by the Vaccination Committee of the Board of Guardians, and Mr. J. Thompson, the Vaccination Officer. The authoritative statements recently issued by the Local Government Board, show the value of Vaccination, when efficiently and carefully performed, in preventing Smallpox. London for some time now has suffered from a severe epidemic of this disease, from which we, in common with other large towns, have been happily exempt for several years. Whether such immunity be due to the increased attention that has been paid to sanitary matters by the Local Authorities or to the efficacy of Vaccination, remains to be seen ; but with these combined, any outbreak of the disease which may occur, should be promptly checked.

Unsound Meat. During the year, 21 seizures of Unsound Food were made, which comprised 3,204 lbs. of Beef and Mutton ; 800 lbs. of Bacon and Ham ; 1,223 Oysters ; 660 lbs. Mussels ; 176 lbs. of Fish ; and 33 Gallons of Milk. In 18 instances the articles seized were destroyed by the consent of the owners. 3 persons were summoned before the Magistrates, 2 of whom were convicted and punished by nominal fines.

**Thanks
to Medical
Profession.**

In conclusion, I desire, on behalf of the Health Committee and myself, to tender to the Medical Profession our sincere thanks for having on three separate occasions met in conference to consider the excessive Infant Mortality of the Borough. My personal acknowledgments are also due to those Medical Men who have kindly sent me information of cases of Infectious Diseases under their care ; such information having been of much value, although it may not in every case have called for any active interference on my part.

SANITARY REPORT.

Systematic Inspection of the Borough was regularly carried out during the year, and every means taken, as far as practicable, to keep it in a good Sanitary condition.

**SANITARY
REPORT.**

The Sanitary Inspectors visit, at stated periods, each District of the Borough; and wherever nuisances are found to exist, notices are served upon the responsible parties to abate the same. Sunderland Parish requires constant supervision, as also do other portions of the town, particularly where there is much tenemented property.

The Inspectors attend at the Health Office every morning, except Sunday, from 9 to 10 a.m., for the purpose of making out their reports and notices, and taking my instructions in reference thereto, and one of them generally attends the office between 4 and 5 p.m. in case anything should have been reported during the day requiring special and urgent attention.

During the year, 4,262 formal notices were served to abate nuisances. In 26 instances it was found necessary to adopt Magisterial proceedings against persons for infringing the Bye-laws and Public Health Act. There were 9 convictions; 2 orders were made to abate nuisances; 1 case was dismissed; and 14 cases were withdrawn on payment of costs, the nuisances having been abated after the issue of the summonses. As compared with previous years, there was a considerable improvement in the readiness with which notices were complied with, and it was only in cases in which unwillingness to abate nuisances was shown, that proceedings were taken.

In 18 instances it was found necessary to serve notices to close cellar dwellings, and abate overcrowding; and 79 notices were served to repair spouts which were defective; whilst in 2 instances only notices were served to abate nuisances arising from Smoke.

SANITARY REPORT.

House Drains.

The faulty and defective manner in which house drains have been laid and connected with the main sewers, has from time to time been brought under the notice of the Health Committee with a view, if possible, of the Corporation obtaining power to exercise the necessary supervision over the laying of the same. Two very glaring cases of defective house drains were reported by me to the Committee with the following observation :—“The question arises as to what would be the best means of preventing such a condition of things as that just brought under your notice. It will be observed that it is invariably in the better class of houses where these unsanitary conditions exist, as in cottage property the sanitary arrangements are at the end of the yard, and some distance from the house. It appears to me that, if it were possible to make regulations on the subject, it would be very desirable that all house drains should be laid in a semi-circular channel, made of brick and cement, 12 inches in diameter, and covered with flags above, so that the drains could be examined with ease at any time ; and further, should any leakage occur, instead of the escaped sewage finding its way into the adjoining earth, and under the floors of houses, it would take the course of the sewer ; and further than this, a drain so laid would be firmly set, and could not settle down at any point, and thereby become displaced.”

It was unanimously resolved by the Committee that Mr. Rounthwaite, the Borough Engineer, be requested to draw up a series of Regulations with reference to House Drains, and submit them for the approval of the Committee. The following is a copy of the Regulations so drawn up and approved by the Council :—

REGULATIONS AS TO HOUSE DRAINAGE.

1.—Before commencing to lay in any house, or other drain, four clear days' notice shall be given, in writing, to the Borough Engineer, and such drain shall not be commenced with until his written notice shall have been given. The pipes shall be left *entirely* uncovered until inspected and *passed* by the Corporation's Inspector.

2.—No such drain, not being merely a yard drain, shall be laid in until the position, size, fall, mode of trapping, and ventilation thereof shall have been approved by the Engineer; and any plans, sections, and specification necessary to give such information shall be deposited with the Engineer at the time of application.

3.—Every house drain must be laid in with one regular gradient from house to main sewer, and no drain shall be turned abruptly down at the junction with such main sewer.

4.—No six-inch house drain shall have a less fall towards the main sewer than one in forty, and no nine-inch house drain shall have a less fall than one in eighty.

5.—No person shall lay any drain underneath any part of any dwelling house.

6.—Every person laying in a drain from any building shall provide within the curtilage of such building, in every such main drain, or other drain of such building which may directly communicate with any sewer, or other means of drainage into which such drain may lawfully empty, a suitable trap at a point as distant as may be practicable from such building; and as near as may be practicable to the point at which such drain may be connected with such sewer or other means of drainage.

7.—No person shall construct any drain in such a manner as to form in such drain any right-angled junction, either vertical or horizontal. Every such person shall cause every branch drain, or tributary drain, to join another drain obliquely in the direction of the flow of such drain.

VENTILATION OF DRAINS.

8.—Every person laying in any drain, shall, for the purpose of securing efficient ventilation of such drain, comply with the following requirements.—

(i.)—He shall provide at least two untrapped openings to the drains, and in the provision of such openings he shall adopt such of the two arrangements hereinafter specified as the circumstances of the case may render the more suitable and effectual.

(a.)—One opening, being at or near the level of the surface of the ground adjoining such opening, shall communicate with the drains by means of a suitable pipe, shaft, or disconnecting chamber, and shall be situated as near as may be practicable to the trap, which shall be provided between the main drain or other drain of the building, and the sewer or other means of drainage with which such drain may lawfully communicate; such opening shall also in every case be situated on that side of the trap which is the nearer to the building.

SANITARY REPORT.

The second opening shall be obtained by carrying up from a point in the drains, as far distant as may be practicable, from the point at which the first-mentioned opening shall be situated, a pipe or shaft vertically to such a height, and in such a manner as effectually to prevent any escape of foul air from such pipe or shaft into any building in the vicinity thereof, and in no case to a less height than ten feet.

(b)—In every case where the foregoing arrangement of the openings to the drains may be impracticable, there shall be substituted the arrangement hereinafter prescribed.

One opening shall be obtained by carrying up from a point as near as may be practicable to the trap, which shall be provided between the main drain or other drain of the building, and the sewer or other means of drainage with which such drain may lawfully communicate a pipe or shaft vertically, to such a height and in such a manner as effectually to prevent any escape of foul air from such pipe or shaft into any building in the vicinity thereof, and in no case to a less height than ten feet. Such opening shall also in every case be situated on that side of the trap which is the nearer to the buildings.

The second opening, being at a point in the drains as far distant as may be practicable from the point at which such last mentioned pipe or shaft shall be carried up, shall be at or near the level of the surface of the ground adjoining such opening, and shall communicate with the drains by means of a suitable pipe or shaft.

(ii.)—He shall cause every opening, provided in accordance with either of the arrangements hereinbefore specified, to be furnished with a suitable grating, or other suitable cover, for the purpose of preventing any obstruction in or injury to any pipe or drain by the introduction of any substance through any such opening. He shall in every case cause such grating or cover to be so constructed and fitted as to secure the free passage of air through such grating or cover by means of a sufficient number of apertures, of which the aggregate extent shall be not less than the sectional area of the pipe or drain to which such grating or cover may be fitted.

(iii.)—Every pipe or shaft which may be used in connection with either of the arrangements hereinbefore specified, shall be of a sectional area not less than that of the drain with which such pipe or shaft may communicate, and not less in any case than the sectional area of a pipe or shaft of the diameter of four inches.

(iv.)—No bend or angle shall (except where unavoidable) be formed in any pipe or shaft used in connection with either of the arrangements hereinbefore specified.

(v.)—Provided always, that for the purpose of either of the arrangements hereinbefore specified the soil-pipe of any water-closet, in every case, where the situation, sectional area, height and mode of construction of such soil pipe, shall be in accordance with the requirements applicable to the pipe or shaft to be carried up from the drains, may be deemed to provide the necessary opening for ventilation which would otherwise be obtained by means of such last-mentioned pipe or shaft.

9. All materials and workmanship employed in the laying of any house or other drain shall be of a kind and quality approved by the Engineer.

The number of Ash-pits and Ash-closets now in the Borough, Removal of House Refuse. is estimated at from between 13 to 14,000, from which during the year, 45,747 tons of refuse was removed by the Corporation, and disposed of either by sending it to the Farmers in the neighbourhood, or by sending it out to sea in Hoppers, and depositing it therein. The receipts for the sale of Manure were some £50 less than in the previous year; however, £850 was received, representing a saving to the rates of $\frac{1}{2}$ d. in the pound. The work of cleansing the town, particularly during the latter months of the year, was much more laborious than in any of the previous three years, caused partly by the snow storms, and to some considerable extent by the Farmers' carts not been sent in as heretofore. This was felt especially in Monkwearmouth, in which district at one time more than one-half of the house refuse was removed by the Farmers in the neighbourhood. The work of systematic cleansing was well carried out during the first half of the year, but latterly it became almost impossible to continue cleansing on the block system, on account of the numerous, and

SANITARY REPORT.

very often unnecessary complaints, sent into the office. In those houses to which the the new Ash-closets have been attached, systematic cleansing was carried out without any difficulty. There are now about 700 Ash-closets in the Borough, which are cleansed at least once or twice a week, and in some cases daily ; and it would, I am satisfied, very much improve the Sanitary condition of the town if owners of property would remove the old Ash-pits, and adopt the Ash-closet ; the cost would be but small, and the benefit to the health of their tenants would be great. I have recommended the Health Committee that, in those cases where it is necessary that refuse should be wheeled through dwelling rooms and passages before it can be removed by the Corporation Carts, owners of property should be called upon to adopt the Ash-closet, and this recommendation has been agreed to.

Paving of Streets.

In my last Annual Report it was stated that the unsanitary condition of the unpaved streets had engaged the attention of the Highways Committee, and that the sum of £60,000 had been borrowed from the Public Works' Loan Commissioners for the purpose of carrying out the necessary and desirable work of paving and flagging. Since that time 46 Streets have been paved : some of them with wooden blocks ; other contracts have been let ; and it is hoped that during the Summer of 1881 nearly the whole of the streets requiring to be paved, will be paved before the Winter sets in again. The condition of many of the unpaved back streets last winter was simply deplorable, and it was with considerable difficulty that horses and carts could pass through them, and the inconvenience and annoyance to foot passengers were very great.

Sewerage Works.

The Sewerage Works in connection with the Borough, for the completion of which the sum of £20,000 was borrowed, are pretty nearly finished, although one or two large areas have still to be provided with Main Drains, the principal one being the area adjoining the Spelter Works, New Hendon. The property in this neighbourhood is in a by no means good sanitary condition, arising chiefly from the want of a proper system of drainage. It is hoped, however, that ere long the landowner will

be prepared to afford every facility to the Corporation to enable them to carry out the Drainage scheme for this district. The Ventilation of the Sewers has been carefully attended to, and two men are constantly employed in cleaning the ventilators, which number between 1 and 2,000. The flushing of the Sewers was also regularly carried out under the directions of the Borough Engineer ; but in consequence of the amount of sickness which prevailed in the Borough last Summer, provision has been made for additional flushing of Sewers during the ensuing Summer and Autumn months ; and it is also intended that the narrow lanes in Sunderland Parish shall from time to time be flushed, if possible with sea water.

The Sanitary condition of the Slaughter Houses was carefully attended to during the year. No further progress has been made in the direction of building public Abattoirs ; no action in the matter having been taken either by the Butchers in the town or by the Corporation. There is no doubt, however, but that the latter body, on their next application to Parliament for a Municipal Act, will make provisional clauses enabling them to erect such buildings, and to prevent the slaughtering of cattle and sheep in shops and other undesirable places. **Slaughter Houses.**

The Slaughter House Bye-laws have been enforced during the year, and in one or two instances it was found necessary to take legal proceedings to compel the due observance of the same.

The Cow-Byres and Milk Shops in the Borough have been kept in a good and wholesome condition, and the Cows have been remarkably free from disease of any kind. Scarlet Fever broke out in one family living in a house adjoining a Cow-Byre, but the cases were properly isolated, and no one in the house was permitted to enter the Byre or the Dairies ; the premises were visited by me on several occasions to see that my instructions were being properly carried out ; and there was no trace of any contamination of the Milk by the Scarlatina poison, as evidenced by the fact that no one who obtained Milk from the farm was attacked by the disease. **Cow Byres and Milkshops.**

SANITARY REPORT.

Offensive Trades.

The premises in which Offensive Trades are carried on, such as Tripe Dressing, Bone Boiling, &c., were visited and examined from time to time by the Sanitary Inspectors. As previously stated, the Health Committee decline to grant Licenses to persons to carry on such trades, preferring that they should do so on their own responsibility, and be dealt with according to law if their method of carrying on their business be such as to become a nuisance or injurious to health.

Common Lodging Houses

The Common Lodging Houses, numbering 37, and registered to accommodate 995 persons, were inspected periodically, both by day and by night, and found to be kept in a cleanly and orderly condition. No case of Typhus or Typhoid Fever was reported as having occurred in any of the Lodging Houses during the year, and no Lodging House Keeper was summoned before the Magistrates for infringing the Bye-laws.

Registration of Laundries.

During the year, cases were reported to me in which persons, following the occupation of Laundry Women, had taken clothes into their houses to wash when infectious disease was therein. I therefore recommended to the Health Committee, that when the Council went to Parliament for a new Municipal Act, a clause should be inserted in such Act providing for the compulsory Registration of Laundries, with power to the Local Authority to make Bye-laws for the regulation of the same.

Adulteration of Food.

Seventy-five articles of Food and Drugs were forwarded to me for analysis during the year, viz. :—71 samples of Milk, and one each of Tea, Flour, Lard, and Tartaric Acid. Of the samples of Milk, 8 were found to be adulterated by the addition of water, varying in quantity from 7·6 to 22·2 per cent., for selling which as pure Milk, four Farmers were fined 5s. and costs, two were fined 20s. and costs, and one was fined £5 and costs, the highest penalty as yet inflicted in this Borough under the Adulteration of Food Act. The samples of Tea, Flour, and Tartaric Acid, were found pure, whilst the sample of Lard was adulterated with water which had been so worked up with it as to form one-third of its bulk.

I desire, in conclusion, to bear testimony to the efficient and careful manner in which Inspectors McKay and Finlay have discharged the duties of their office. Mr. Wilkinson, Superintendent of Scavenging, and the Foremen under him, have also carried out their respective duties to my entire satisfaction; whilst a word of commendation is also due to Mr. Trotter, the Horsekeeper, for the way in which the Stables and Horses have been attended to. The Corporation now possesses a valuable stud of 40 Horses, second to none in the North of England, and Stables, Granaries, and Land worth several thousand pounds.

APPENDIX.

TABLE OF BIRTHS
REGISTERED IN THE BOROUGH FOR THE YEAR ENDING DECEMBER 31ST, 1880.

DISTRICTS.	Population.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.		Totals.		Total.	Rate per 1,000.
		M	F	M	F	M	F	M	F	M	F		
Sunderland, East	10,686	49	53	47	46	32	39	53	39	181	177	258	24·1
Sunderland, West	8,504	27	33	29	39	25	26	19	19	100	117	217	25·5
South Bishopwearmouth	35,675	185	156	179	194	178	155	151	162	693	667	1360	38·2
North Bishopwearmouth ..	32,225	195	163	181	198	180	179	145	161	701	701	1402	43·5
Monkwearmouth	29,640	133	109	141	128	137	115	137	135	548	487	1035	34·9
		589	514	577	605	552	514	505	516	2223	2149	4372	
Totals	116,730	1103		1182		1066		1021		4372		4372	
Rate per 1,000		9·4.		10·1.		8·1.		8·7.				37·4.	

TABLE OF DEATHS

REGISTERED IN THE BOROUGH FOR THE YEAR ENDING DECEMBER 31ST, 1880.

DISTRICTS.	Population.	First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.		Totals.		Total.	Rate per 1,000.
		M	F	M	F	M	F	M	F	M	F		
Sunderland, East	10,616	22	20	22	26	37	29	49	32	130	107	237	21.1
Sunderland, West	8,504	16	24	22	13	16	22	17	22	71	81	152	17.5
South Bishopwearmouth	35,675	83	99	107	88	123	103	93	88	406	378	784	22.4
North Bishopwearmouth	32,225	137	115	101	108	145	136	156	149	539	508	1047	32.4
Monkwearmouth	29,640	67	67	78	84	96	105	99	85	340	341	681	23.4
		325	325	330	319	417	395	414	376	1486	1415	2901	24.4
Totals	116,730	650		649		812		790		2901		2901	24.4
Rate per 1,000		5.6.		5.6.		7.0.		6.8.		24.4.			

IV.

Occupation of Persons, 20 Years of Age and
upwards, who died from the undermentioned
Diseases during 1880,

(Given as accurately as the Returns allowed.)

Occupation.	Typhoid.	Typhus.	Heart Disease.	Phthisis.	Disease of Lungs.	Apoplexy.	Paralysis.	Cancer.	Totals.
Architect	..	..	1	..	..	..	..	..	1
Agents	..	..	..	..	2	..	..	..	2
Accountants	..	..	..	1	..	..	1	..	2
Auctioneer.....	..	..	..	..	..	..	1	..	1
Brickmaker	..	..	..	1	..	..	..	..	1
Bookbinder	..	..	1	..	..	..	..	..	1
Butchers.....	..	..	..	..	2	..	..	1	3
Builders	..	..	1	..	..	..	1	..	2
Boilermakers.....	..	..	..	1	1	..	..	..	2
Barmen	1	..	..	1	..	..	..	..	2
Bottlemakers	..	..	..	..	..	..	2	1	3
Blacksmiths	2	..	..	1	1	2	1	..	7
Bakers	1	..	..	1	..	..	..	..	2
Coopers	..	..	1	..	..	..	1	..	2
Cartmen.....	1	..	1	2	2	..	..	1	7
Carver.....	..	..	..	..	1	..	..	..	1
Cabdriver	..	..	1	..	..	..	..	..	1
Cellarmen ..	..	..	..	1	1	..	..	..	2
Clerks	1	..	2	2	..	..	..	..	5
Coachman	..	..	..	..	1	..	..	..	1
Chemist	..	..	..	..	1	..	..	..	1
Cork Manufacturer ..	..	..	1	..	..	..	..	..	1
Chapel Keeper	..	..	..	..	..	1	..	..	1
Dyer	..	..	1	..	..	..	..	..	1
Drapers	2	..	..	..	1	1	..	..	4
Driller.....	..	..	..	..	1	..	..	..	1
Enginemen	..	..	..	..	2	..	..	..	2
Engineers	..	..	..	1	..	1	1	..	3
Engine Fitters	..	..	..	..	2	..	1	..	3
Fisherman.....	..	..	..	..	1	..	..	..	1
Fireman	..	..	..	..	1	..	..	..	1
Farmers	..	..	..	..	3	..	..	..	3
Gardeners	..	..	1	..	1	1	..	..	3
Glassmakers	..	..	1	3	1	..	..	1	6
Groom	..	..	..	..	1	..	..	..	1
Gentlemen.....	..	..	1	..	1	1	1	1	5
Grocer	..	..	1	..	..	..	..	..	1
Hay Dealer	..	..	..	..	..	..	1	..	1
Horsekeeper	..	..	..	..	1	..	..	..	1
Hawkers.....	..	..	..	..	3	..	..	..	3
Hairdresser	..	..	..	1	..	..	..	..	1
Innkeepers	1	..	1	1	..	..	..	..	3
Carried forward ..	9	..	15	17	31	7	11	5	95

V.

Occupation of Persons—Continued.

Occupation.	Typhoid.	Typhus.	Heart Disease.	Phthisis.	Disease of Lungs.	Apoplexy.	Paralysis.	Cancer.	Total.
Brought forward..	9	..	15	17	31	7	11	5	95
Ironmonger	..	..	..	1	..	..	..	..	1
Joiners	..	1	3	5	..	..	2	1	12
Labourers	4	1	4	7	18	4	7	1	46
Lighthouse Keeper ..	..	..	1	..	..	..	..	..	1
Master Mariners	..	..	2	..	3	..	3	..	8
Marine Store Dealer..	..	1	..	..	..	..	..	..	1
Miners	1	1	..	1	3	..	..	1	7
Masons	..	..	..	2	1	..	..	..	3
Painters	..	..	1	3	1	1	1	..	7
Printers	1	..	..	1	1	1	..	..	4
Plumbers	1	..	..	2	..	..	..	..	3
Platers	..	..	..	..	1	1	..	..	2
Planemaker	..	..	..	1	..	..	..	..	1
Paper Maker	..	..	..	1	..	..	..	..	1
Pilots	..	..	..	1	2	..	..	..	3
Platelayer	..	..	..	..	1	..	..	..	1
Potters	..	..	..	1	1	..	..	..	2
Ropemakers	..	..	..	1	..	..	1	1	3
Rivetter	..	..	..	1	..	..	..	..	1
Rigger	..	..	..	..	..	..	1	..	1
Shipwrights	..	..	8	..	4	1	..	..	13
Schoolmaster	..	..	1	..	..	..	..	..	1
Sawyers	..	..	..	..	2	..	..	1	3
Seamen	..	1	4	2	11	3	7	1	29
Shoemakers	..	..	1	..	5	1	2	..	9
Surgeons	..	..	..	..	2	..	..	..	2
Sweep	..	..	..	1	..	..	..	..	1
Shipbuilders	..	..	..	1	..	..	..	1	2
Sergeant	..	..	1	..	..	..	..	..	1
Soldier	..	..	..	..	1	..	..	..	1
Shipkeeper	..	..	..	..	1	..	..	..	1
Shipowner	..	..	..	..	..	1	..	..	1
Ship Chandler	..	..	..	..	1	..	..	..	1
Sailmakers	..	..	1	1	..	..	..	..	2
Tinsmiths	..	..	1	2	..	..	..	..	3
Tobacconist	..	..	..	..	..	..	..	1	1
Trimmer	..	1	..	..	..	..	..	..	1
Travellers	..	..	..	..	1	1	..	..	2
Tailors	..	1	1	1	1	..	2	..	6
Waiters	..	..	..	1	1	..	..	..	2
Warehouseman	..	..	..	..	1	..	..	..	1
Weavers	..	..	1	..	1	..	..	..	2
Watchmen	..	..	..	..	2	..	..	..	2
Watermen	..	..	1	2	1	..	1	..	5
Whitesmith	..	..	..	1	..	..	..	..	1
Totals	16	7	46	57	98	21	38	13	286
Females	6	1	42	93	96	15	34	23	310
Grand Totals..	22	8	88	150	194	36	72	36	596

VI.

LIST OF STREETS

WHEREIN ZYMOTIC DISEASES OCCURRED IN THE YEAR 1880,

(Given as accurately as the Returns allowed.)

SUNDERLAND DISTRICT.

Name of Street.	Smallpox.	Fever.	Scarlet Fever	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed.	Deaths.
Berwick street	..	1	..	..	..	..	..	..	1
Burleigh street.....	..	3	10	1	..	..	..	2	4
Bull open	..	..	1	..	..	..	..	..	..
Bull lane	..	..	2	..	..	..	1	..	2
Bank street	..	..	..	..	..	..	1	..	1
Carr's yard... ..	..	..	..	..	..	1	..	..	1
Coronation street.....	..	..	3	1	..	..	..	..	..
Chipchase street	..	..	2	..	1	..	..	..	..
Church street	..	..	1	..	..	..	..	..	1
Covent Garden street	..	..	3	6	..	..	1	2	3
Drury lane.....	..	..	1	..	..	..	..	..	1
Flag lane	..	..	9	5	..	..	1	..	6
Fitter's row	..	..	..	1	..	..	..	..	..
Fighting Cock lane.....	..	..	..	1	..	..	..	..	..
Golden alley	..	..	2	5	..	..	..	..	..
George street.....	..	..	1	4	..	..	2	..	3
Havelock place.....	..	..	3	1	..	..	1	..	2
Hartley street	..	..	2	..	..	..	..	..	1
High street East	..	2	7	..	..	1	3	..	9
Horn's lane	..	..	..	7	..	..	..	..	2
Havelock street	..	..	..	..	..	..	1	..	1
James William street	..	..	..	1	..	..	1	..	2
Lombard street	..	..	..	..	..	..	1	..	1
Long bank.....	..	..	2	..	..	..	..	..	1
Low street.....	..	1	..	..	..	1	1	..	3
Maling's rigg	..	1	..	3	..	..	2	..	3
Moorgate street	..	..	4	1	..	..	..	..	1
Minorca	..	..	2	..	..	3	..	1	3
Military Barracks	..	..	..	1	..	..	..	1	..
Carried forward ..	..	8	55	38	1	6	16	6	52

VII.

SUNDERLAND DISTRICT.—Contd.

Name of Street.	Smallpox.	Fever.	Scarlet Fever	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed.	Deaths.
Brought forward ..	..	8	55	38	1	5	16	6	52
Neasham square	..	..	..	1	..	1	..	..	2
Neasham place.....	..	..	4	..	..	..	1	..	3
Northumberland place ..	..	..	1	1	..	2	..	1	1
New Grey street	..	..	4	..	..	..	..	..	2
Old Grey street	..	..	..	..	..	..	1	..	1
Prospect row.....	..	..	..	..	..	..	1	..	1
Pottery bank.....	..	1	1	..	..	..	..	1	1
Robinson's lane	..	..	3	..	..	..	1	1	3
South alley	..	..	1	..	..	..	..	..	1
Stafford street	..	..	1	..	..	..	..	..	1
Sans street.....	..	..	7	..	..	..	..	..	1
Spring Garden lane.....	..	1	..	2	..	..	1	1	1
Silver street	..	..	4	1	..	..	2	..	6
Trafalgar square	..	1	..	..	..	..	..	1	..
Trinity place.....	..	..	1	..	..	..	1	..	1
Vine street	..	..	22	1	..	1	..	1	6
West avenue.....	..	1	..	..	..	..	..	1	1
Warren street	..	1	4	..	..	..	..	1	3
Walton lane	..	..	3	..	..	..	..	..	..
Total	..	13	111	44	1	9	24	14	87

VIII.

BISHOPWEARMOUTH DISTRICT.

Name of Street.	Smallpox.	Fever.	Scarlet Fever	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed.	Deaths.
Armitage street	..	..	4	..	..	..	..	..	1
Azalea terrace	..	..	1	..	..	..	..	..	1
Addison street	..	..	1	..	..	..	3	..	3
Avon street	..	..	1	..	..	..	..	..	1
Aylmer street	..	..	2	..	..	..	..	..	1
Alderson street.....	..	..	5	..	..	..	..	..	4
Australia street	..	..	3	2	..	..	1	..	3
Alliance street	..	..	1	..	..	..	..	..	1
Amberley street	..	..	1	..	..	3	1	..	3
Ailesbury street	..	..	..	2	..	..	..	..	1
Albert street.....	..	..	..	1	..	..	..	..	1
Alexandra terrace	..	..	2	..	..	..	..	..	2
Ayre's Quay street	..	..	..	..	..	..	2	..	2
Borough road	..	..	..	..	..	..	1	..	1
Booth street	..	..	..	1	..	..	..	..	1
Burlington road	..	..	..	..	..	5	..	..	1
Belle Vue	..	..	..	3	..	..	..	..	..
Bell street	..	..	5	..	..	..	1	..	2
Boughton street	..	..	1	..	..	..	..	..	..
Buxton terrace.....	..	..	..	2	..	..	..	..	..
Biss street	..	..	4	..	..	..	2	..	4
Bedford street	..	..	1	..	..	..	..	..	1
Bramwell street	..	..	2	5	..	..	..	..	3
Bedford square.....	..	..	1	..	..	..	1	..	2
Brougham street	..	..	5	4	..	..	1	..	5
Cousin street.....	..	..	2	..	..	..	..	..	2
Crow street	..	..	1	..	..	..	..	..	1
Crowtree terrace	..	..	1	..	..	..	..	..	..
Crowtree road	..	..	1	..	..	..	..	..	1
Church street	..	..	10	..	..	..	..	..	5
Cumberland street	..	1	4	4	..	..	..	..	4
Crescent row.....	..	2	2	1	..	..	1	2	3
Cirencester street.....	..	1	4	..	..	..	..	..	2
Cliff street	..	..	8	..	..	..	..	..	2
Claremont terrace	..	..	2	..	..	..	..	..	..
Catherine street, Millfield	..	..	1	1	..	4	..	..	4
Cromwell street	..	..	2	..	..	..	..	..	1
Coatesworth street	..	..	1	..	..	..	..	..	1
Castle street	..	..	2	..	..	..	..	..	2
Charles street	..	..	..	..	..	..	1	..	1
Cornwall street	..	..	1	..	..	..	..	..	..
Clark terrace	..	..	..	2	..	..	..	..	1
Carter street	..	..	..	..	..	3	..	..	1
Clementina street	..	..	..	..	..	..	3	..	3
Commercial road	..	..	..	..	..	..	1	..	1
Clazey's buildings	..	..	..	..	..	..	1	..	1
Coxon street	..	..	..	..	..	..	1	..	1
Carried forward ..	..	4	82	21	..	15	21	2	81

IX.

BISHOPWEARMOUTH DISTRICT.—Contd.

Name of Street.	Smallpox.	Fever.	Scarlet Fever	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed.	Deaths.
Brought forward....	..	4	82	21	..	15	21	2	81
D'Arcy terrace	..	..	..	..	..	..	1	..	1
Duke street	..	..	..	..	..	..	1	..	1
D'Arcy street	..	..	1	2	..	..	1	..	3
Derwent street	..	..	1	..	..	..	..	..	1
Diamond Hall row	..	..	1	..	..	..	..	..	1
Deptford road	..	..	11	..	..	..	..	..	3
Ditchburn terrace	..	..	2	..	..	..	..	..	1
Dove street	..	..	9	..	..	..	..	..	1
Dock street	..	..	..	3	..	..	..	..	1
Esplanade	..	..	2	..	..	..	..	..	..
Elgin street	..	..	5	2	..	..	1	..	4
Emma street	..	..	3	..	..	4	..	..	3
Exhibition terrace	..	..	..	4	..	..	..	..	..
East Cross street	..	..	..	..	..	..	1	..	1
East street.....	..	..	..	..	..	..	1	..	1
Fowler terrace	..	..	..	2	..	..	..	..	1
Fawcett street	..	..	1	..	..	..	..	1	..
Frederick street, Pallion	..	..	2	..	..	..	..	..	..
Fenwick street	..	2	..	..	..	..	..	..	..
Franklin street.....	..	2	..	1	..	..	..	..	2
Fenwick's yard.....	..	1	..	..	..	..	..	..	1
Farrington row.....	..	..	3	..	..	..	4	..	5
Gill Bridge avenue	..	..	8	..	..	2	..	..	5
Glebe Cleft villas.....	..	..	2	..	..	..	2	..	..
Green street	..	1	..	3	..	2	1	..	5
Glebe street	..	..	1	..	..	..	1	..	1
Granville street	..	..	8	..	..	..	..	..	3
Grafton street	..	..	1	..	..	..	..	..	1
George street.....	..	..	2	1	..	..	..	..	1
Garden place.....	..	..	5	..	..	2	..	..	3
Garden street	..	..	1	..	..	..	..	..	1
Hawthorn street	..	..	..	..	..	..	1	..	1
Howick street	..	..	..	..	..	..	1	..	1
Hylton street.....	..	..	..	..	..	..	1	..	1
Hedworth terrace	..	..	..	..	..	..	1	..	1
Harrogate street	..	..	5	..	..	..	2	..	3
Hort street.....	..	..	..	4	..	..	..	..	..
Hillfield terrace	..	..	..	1	..	..	..	..	..
Hetton street.....	..	..	3	2	..	1	..	..	2
Humbledon view	..	..	..	1	..	..	..	..	1
Hopper street	..	2	8	4	..	..	..	..	3
Handel street	..	..	..	2	..	..	..	..	1
Hendon road.....	..	..	3	..	..	..	..	..	1
Hanover place	..	..	1	..	..	2	..	..	2
Hume street	..	..	3	1	..	..	1	..	1
Carried forward ..	..	12	174	61	..	28	42	3	150

BISHOPWEARMOUTH DISTRICT.—Contd.

Name of Street.	Smallpox.	Fever.	Scarlet Fever	Measles.	Diphtheria.	Whooping Cough	Diarrhoea.	Removed.	Deaths.
Brought forward ..	..	12	174	61	..	28	42	3	150
Hylton road	..	..	1	3	..	..	..	..	2
Hedworth street	..	..	6	..	..	..	1	..	2
Hope street	..	..	1	4	..	2	..	..	4
Hedley street	..	..	7	..	..	..	1	..	1
Hudson's buildings.....	..	..	6	..	..	..	..	..	1
Hendon street	..	..	9	..	..	..	..	..	1
High street West.....	..	1	3	1	..	..	..	1	1
Hillfield	..	1	..	..	..	..	..	1	1
Harper terrace	..	..	2	..	..	..	..	..	2
Harrison street.....	..	..	3	..	..	..	..	..	2
Henry street.....	..	1	9	8	..	..	1	..	9
Infirmity row	..	..	1	..	..	..	1	..	2
John Candlish road	..	..	..	..	..	..	1	..	1
John street, Ballast hills..	..	..	..	7	..	..	1	..	3
Johnson street	..	1	9	5	..	2	1	..	8
Kings's House Farm	..	..	2	..	..	..	..	..	1
King's road	..	..	..	2	..	7	..	..	1
King's place	..	..	..	..	..	..	1	..	1
King's street.....	..	..	..	..	..	..	1	..	1
Lumley street	..	..	..	..	..	..	2	..	2
Lisburn terrace	..	..	..	1	..	..	..	..	..
Lisburn street	..	..	..	1	..	..	1	..	2
Low row.....	..	..	..	1	..	..	..	..	..
Lister street	..	..	2	..	..	..	1	..	2
Lodge terrace	..	..	1	..	..	..	1	..	1
Lime street	..	..	7	..	..	..	..	..	2
Lambton street.....	..	..	4	..	..	..	..	..	2
Lawton street	..	..	1	1	..	1	..	..	3
Lawrence street	..	2	1	5	..	..	1	1	4
Morley street	..	..	2	..	..	..	..	..	2
Maple street	..	1	..	..	..	..	..	..	1
Margaret street.....	..	..	1	..	..	..	..	..	1
Middle street.....	..	..	1	..	..	..	..	..	1
Meaburn street.....	1	..	..	..	..	..	..	1	..
Moor street	..	..	4	..	..	..	1	..	3
Milburn street	..	..	10	..	..	3	1	..	7
Mill street	..	..	..	..	..	3	..	..	1
Marlborough street.....	..	..	..	..	..	..	1	..	1
Mainsforth terrace	..	..	4	..	..	..	1	..	1
Murton street	..	..	1	..	..	..	..	..	..
Mount pleasant	..	..	2	..	..	..	..	..	..
Neville street	..	..	9	..	..	..	..	..	3
Nicholson street	..	..	..	..	..	..	1	..	1
North Alfred street.....	..	..	4	2	..	..	..	..	1
New Anne street	..	..	3	..	..	..	1	..	1
Carried forward ..	1	19	290	102	..	46	63	7	236

BISHOPWEARMOUTH DISTRICT.—Contd.

Name of Street.	Smallpox.	Fever.	Scarlet Fever	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed.	Deaths.
Brought forward ..	1	19	290	102	..	46	63	7	236
Norman street	..	..	5	5	..	2	3	..	7
Nile street	..	..	1	..	..	3	..	..	3
Northumberland street ..	..	..	3	3	..	..	..	..	4
Noble street	..	..	2	..	..	..	..	..	1
Napier street.....	..	..	11	..	..	..	..	..	2
Oak street	..	1	..	..	..	..	..	..	1
Olive street	..	1	..	..	..	..	..	..	1
Ogden street.....	..	..	2	..	..	1	..	..	1
Offerton street	..	..	3	2	..	..	2	..	3
Old Mill road	..	..	..	..	..	..	1	..	1
Peacock street	..	..	4	2	1	..	..	..	3
Pemberton row.....	..	..	..	2	..	..	..	..	..
Panns	..	1	..	2	..	..	1	..	3
Pemberton street.....	..	..	1	3	..	..	..	..	1
Pallion house	..	..	1	..	..	..	..	..	..
Potts street	..	..	1	..	..	2	4	..	4
Queen street	..	..	..	5	..	..	..	..	1
Robinson street	..	2	5	..	..	..	3	..	6
Rectory buildings	..	..	5	..	..	..	..	..	..
Robinson terrace	..	..	7	..	..	..	..	..	4
Ropery road	..	..	3	1	..	..	2	..	2
Rosanna street	..	..	4	..	..	..	..	..	1
Ravensworth street.....	..	..	2	..	..	..	..	..	2
Ropery walk	..	..	8	..	..	..	..	4	1
Rutland street	..	..	..	1	..	..	1	..	1
Rosalia terrace	..	..	..	..	..	..	2	..	2
Rock terrace	..	..	..	..	..	..	1	..	1
St. Mark's street	..	..	..	..	..	..	1	..	1
South street	..	..	..	..	..	..	1	..	1
St. Mark's road	..	..	..	..	..	..	1	..	1
Suffolk street	..	..	6	..	..	..	1	..	5
Stanley street	..	1	3	..	..	3	1	..	3
St. Luke's road	..	..	1	..	..	..	..	..	1
South Durham street	..	..	4	..	..	..	..	..	3
Simpson street	..	..	8	3	..	4	..	..	5
St. Cuthbert's terrace.....	..	..	6	..	..	1	..	1	3
Salem hill	..	1	..	..	..	..	..	..	1
Spelter Works road.....	..	..	1	..	..	..	..	..	1
Southgate	..	..	3	..	..	..	..	..	1
Summerhill	..	..	1	..	..	..	..	..	..
Sussex street.....	..	..	4	..	..	..	..	..	3
Tees street.....	..	..	2	..	..	3	..	..	2
The Infirmary	..	..	5	..	..	..	..	5	..
Tower street	..	2	..	..	..	..	2	..	4
The Royalty	..	..	6	..	..	..	..	..	2
Carried forward ..	1	28	403	131	1	65	90	17	329

XII.

BISHOPWEARMOUTH DISTRICT.—Contd.

Name of Street.	Smallpox.	Fever.	Scarlet Fever	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed.	Deaths.
Brought forward ..	1	28	403	131	1	65	90	17	329
Trimdon street.....	..	..	5	2	..	1	1	3	3
Tyne street	..	..	2	..	..	1	..	..	1
Tweed street.....	..	..	2	..	..	..	..	..	..
The Avenue	..	..	2	..	..	..	..	..	2
Trewhitt's buildings	..	..	..	..	..	..	1	..	1
Vine place.....	..	..	..	1	..	..	..	..	1
Vine Lodge	..	..	..	1	..	..	..	1	..
Volunteer Garrison.....	..	..	7	1	..	..	..	5	3
Whitehouse road	..	..	2	..	..	..	1	..	2
White house, Pallion	..	..	2	..	..	..	..	..	2
Williams street.....	..	..	12	3	..	..	1	..	5
West Wear street	..	..	6	..	..	..	..	..	3
Winchester terrace	..	..	1	..	..	..	..	..	..
William street	..	3	6	..	..	1	..	6	5
Ward street	..	..	10	4	..	..	2	..	7
Walworth street	..	..	4	2	..	..	..	4	2
Wood street	..	..	1	..	..	..	..	..	1
Wear street	..	..	4	3	..	2	1	..	7
Washington street	..	..	1	..	..	..	..	..	2
Waterworks road.....	..	..	..	..	..	..	..	..	..
Wilson street.....	..	..	..	..	..	..	1	..	1
Wyndham terrace	..	..	..	..	..	..	1	..	1
Woodbine street	..	..	..	..	..	3	4	..	5
Wellington lane	..	..	..	1	..	..	..	1	.
Watson street	..	..	..	1	..	..	..	..	..
Woodbine terrace	..	..	..	..	..	..	1	..	1
Wellington road	..	..	..	..	..	..	1	..	1
Ward terrace.....	..	..	..	..	..	..	1	..	1
Wall street.....	..	..	..	..	..	..	1	..	1
Zion street.....	..	..	3	..	..	..	1	2	2
Total	1	31	478	158	1	73	108	39	389

XIII.

MONKWEARMOUTH DISTRICT.

Name of Street.	Smallpox.	Fever.	Scarlet Fever	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed.	Deaths.
Albany street	..	..	10	..	..	..	..	..	2
Bond street	..	1	10	3	..	..	3	..	7
Bonner's field	..	1	..	3	..	..	..	..	2
Byron street	..	4	3	..	..	..	1	..	2
Brandling street	..	..	20	..	..	9	1	..	10
Barrington street.....	..	..	1	7	..	..	..	..	1
Brooke street.....	..	..	1	6	..	1	4	1	7
Back stables	..	..	..	3	..	..	..	..	1
Barclay street	..	..	1	2	..	..	1	..	3
Crozier street	..	..	..	1	..	..	..	..	1
Church street	..	..	1	1	..	..	1	..	3
Charles street	..	1	7	..	..	2	..	..	5
Chilton street	..	1	1	..	..	2	2	..	4
Colliery square.....	..	..	1	..	..	..	..	..	..
Dame Dorothy street	..	5	7	..	..	3	3	..	8
Devonshire street.....	..	1	2	..	..	..	..	1	1
Dock street	..	..	7	2	..	2	1	..	4
Dixon square.....	..	..	..	..	..	1	..	..	1
Dundas street	..	..	..	..	..	6	..	..	5
Duke street	..	..	..	..	..	..	3	..	3
Dove's open	..	..	..	..	..	..	1	..	1
Edmundson street	..	..	1	..	..	..	..	..	1
Ellerslie terrace	..	..	5	..	..	..	..	..	4
Eglinton street.....	..	2	5	..	..	..	..	..	4
Fulwell road.....	..	..	9	..	..	..	..	1	2
Finsbury street.....	..	1	..	3	..	1	..	..	2
Garden court.....	..	..	..	..	..	..	1	..	1
Gosforth street.....	..	1	2	..	..	..	3	1	4
Gladstone street	..	..	7	..	..	..	3	..	6
George street.....	..	1	4	..	..	..	..	..	2
Howick place	..	..	6	1	..	..	..	..	3
Hedworth street	..	1	2	..	..	..	1	..	2
Howard street	..	..	2	..	..	..	1	..	2
Hay street	..	1	..	..	..	..	..	..	1
Hardwicke street	..	..	11	..	..	..	1	..	5
Hodgson's buildings	..	..	..	3	3	..	..	..	2
Hood street	..	..	..	..	..	1	3	..	4
Huddleston street	..	..	..	..	..	1	1	..	2
Howick street	..	..	..	..	..	..	1	..	1
Hamilton street	..	..	..	..	..	..	2	..	2
Liddell terrace	..	..	3	6	..	..	..	..	4
Long row	..	..	..	..	..	..	3	..	3
Mulgrave street	..	..	1	..	..	2	..	..	2
Millum terrace	..	..	5	2	..	1	1	..	5
Mill row.....	..	1	2	..	..	..	1	..	2
Normanby street.....	..	1	3	..	..	..	2	1	3
North Bridge street.....	..	..	..	..	1	..	..	..	1
Carried forward ..	..	23	140	43	4	32	45	5	141

XIV.

MONKWEARMOUTH DISTRICT.—Contd.

Name of Street.	Smallpox.	Fever.	Scarlet Fever	Measles.	Diphtheria.	Whooping Cough.	Diarrhoea.	Removed.	Deaths.
Brought forward ..	..	23	140	43	4	32	45	5	141
North street	..	..	2	..	..	..	2	..	3
Osborne street	..	..	3	..	..	..	..	..	1
Pilgrim street	..	..	..	7	..	..	3	..	6
Portobello lane.....	..	..	4	..	..	4	..	..	2
Roker avenue	..	1	6	..	..	2	2	1	7
Rendlesham street	..	..	6	7	..	..	..	..	4
Ross street.....	..	..	2	..	..	..	..	..	..
Rothsay street	..	..	1	..	..	..	3	..	3
Richmond street	..	..	..	..	..	..	2	..	2
Smithson square	..	..	..	..	..	..	1	..	1
Society lane	..	..	1	..	..	..	1	..	2
Stobart street	..	1	..	..	..	..	..	1	1
Selborne street	..	..	1	..	..	..	..	..	1
Southwick lane.....	..	..	1	3	..	..	..	..	2
Thomas street	..	..	1	3	..	..	..	..	2
Trafalgar court	..	..	6	..	..	..	..	..	3
Victor street	..	..	8	3	..	11	2	..	12
Victoria cottages	..	..	1	..	..	..	..	..	..
Vulcan place.....	..	..	1	..	..	..	..	..	..
Waterloo street.....	..	..	2	..	..	..	..	..	..
Warwick street.....	..	..	1	..	..	4	..	..	1
Wayman street.....	..	..	3	..	..	3	2	..	6
Wallace street	..	1	..	..	..	..	1	..	1
Williamson terrace	..	2	..	..	..	..	1	..	1
Whickham street	..	..	1	..	..	..	..	..	1
Whitburn street	..	..	11	3	..	..	..	..	7
Wardell terrace	..	..	..	3	..	..	..	..	1
Wreath hill	..	..	..	2	..	..	..	..	1
Wreath Quay road	..	..	..	1	..	..	..	..	1
York street	..	..	1	..	..	..	..	..	1
Zetland street	..	..	..	2	..	..	2	..	3
Total	..	28	203	77	4	56	66	7	217
Sunderland District.....	..	13	111	44	1	9	24	14	87
Bishopwearmouth District	1	31	478	158	1	73	108	39	389
Monkwearmouth District..	..	28	203	77	4	56	66	7	217
Grand Totals.....	1	72	792	279	6	138	198	60	693

*Mortality from Principal Zymotic Diseases during the Ten Years
ending December 31st, 1880.*

Year.	Smallpox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever— Typhus and Typhoid.	Diarrhoea.	Rate per 1,000.
1871	850	58	190	16	72	221	128	15·5
1872	54	50	114	9	82	106	112	5·3
1873	1	33	28	16	58	53	153	3·2
1874	..	59	140	13	17	53	165	4·4
1875	..	5	61	8	133	42	141	3·6
1876	..	42	133	9	53	53	145	3·9
1877	..	1	138	15	63	61	82	3·2
1878	1	93	186	14	175	53	204	6·4
1879	..	1	243	10	44	27	73	3·4
1880	..	99	312	3	73	42	203	6·2
Total..	906	441	1545	113	770	711	1406	5·5

Statement of Vaccination in the entire Districts of the Sunderland Union,

YEAR ENDING DECEMBER, 1879,

(AS FURNISHED BY MR. J. THOMPSON, VACCINATION OFFICER.)

REGISTRATION DISTRICTS.	Births Registered.	Vaccinated by Public Vaccinator.	Vaccinated by Private Medical Practitioners	Total Vaccinated.	Postponed by Medical Authority.	Dead previous to Removal.	Removals into other Unions.	In Abeyance
Sunderland East	337	259	34	293	1	29	13	1
Sunderland West	237	163	25	188	4	31	14	..
Bishopwearmouth South	1770	926	558	1494	30	174	76	6
Bishopwearmouth North	1570	690 1*	539	1230	26	132	179	3
Monkwearmouth	1400	809 1*	352	1162	9	145	83	1
Totals	5314	2847	1508	4357	70	511	365	11

*Denotes "Insusceptibility."

XVII.

TABLE OF METEOROLOGICAL OBSERVATIONS

From January to March, 1880.

JANUARY.						FEBRUARY.						MARCH.					
Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.
		Highest.	Lowest.					Highest.	Lowest.					Highest.	Lowest.		
1	29.554	56.0	37.0	SW	.03	1	30.190	57.0	40.0	SW	.00	1	28.960	52.0	41.0	WSW	.00
2	29.817	49.0	43.0	NW	.00	2	30.068	50.0	40.0	SW	.00	2	28.940	51.0	36.0	WNW	.05
3	30.210	49.0	41.0	WSW	.04	3	30.180	58.0	43.0	SW	.00	3	29.900	51.0	40.0	WSW	.11
4	30.290	50.0	43.0	SW	.00	4	30.183	54.0	40.0	SW	.00	4	29.473	54.0	40.0	WNW	.00
5	30.334	48.0	40.0	SW	.00	5	29.817	48.0	40.0	SW	.01	5	29.683	57.0	40.0	WSW	.27
6	30.400	48.0	40.0	NW	.00	6	29.754	47.0	35.0	SW	.00	6	29.883	52.0	47.0	W	.00
7	30.610	48.0	40.0	WNW	.00	7	29.470	52.0	37.0	SW	.01	7	29.978	57.0	47.0	NW	.00
8	30.580	45.0	40.0	W	.00	8	29.195	48.0	41.0	NW	.21	8	30.540	54.0	40.0	SSE	.00
9	30.470	38.0	36.0	SW	.00	9	29.386	44.0	32.0	ESE	.00	9	30.342	44.0	37.0	S	.00
10	30.540	39.0	31.0	SW	.00	10	29.340	47.0	37.0	WNW	.23	10	30.140	43.0	40.0	NE	.00
11	30.600	40.0	30.0	SSW	.00	11	29.720	50.0	35.0	NW	.00	11	30.420	46.0	40.0	ENE	.13
12	30.630	36.0	34.0	SW	.00	12	29.588	51.0	35.0	SW	.03	12	30.406	44.0	40.0	SSE	.00
13	30.535	36.0	30.0	NW	.00	13	30.034	53.0	36.0	NW	.00	13	30.250	60.0	41.0	NW	.16
14	30.290	37.0	28.0	NW	.01	14	29.680	43.0	36.0	SW	.07	14	30.287	47.0	40.0	NNE	.00
15	30.228	36.0	32.0	NW	.00	15	29.722	42.0	38.0	SSW	.01	15	30.300	47.0	41.0	SE	.00
16	29.940	38.0	32.0	WNW	.05	16	29.142	42.0	39.0	ESE	.15	16	30.190	43.0	38.0	ESE	.02
17	30.090	36.0	32.0	NW	.29	17	28.842	49.0	39.0	W	.32	17	30.200	51.0	36.0	SE	.00
18	29.909	38.0	34.0	NNW	.00	18	29.120	54.0	40.0	SW	.00	18	30.409	52.0	33.0	SE	.00
19	30.445	32.0	29.0	NW	.09	19	29.907	53.0	40.0	SW	.35	19	30.430	48.0	34.0	SE	.00
20	30.400	33.0	30.0	NW	.00	20	29.033	51.0	44.0	SW	.06	20	30.309	42.0	29.0	SE	.00
21	30.400	43.0	32.0	NW	.00	21	29.525	55.0	41.0	WNW	.03	21	30.400	50.0	35.0	SE	.00
22	30.355	42.0	28.0	NW	.00	22	29.656	44.0	42.0	NNE	.18	22	30.375	42.0	38.0	SE	.00
23	30.349	39.0	37.0	NW	.00	23	30.100	42.0	40.0	ESE	.01	23	30.400	49.0	37.0	SE	.00
24	30.340	39.0	36.0	NW	.00	24	30.284	49.0	35.0	WNW	.00	24	30.412	49.0	34.0	SE	.00
25	30.164	32.0	30.0	SW	.00	25	30.228	50.0	40.0	SW	.00	25	30.250	45.0	39.0	ESE	.00
26	30.284	34.0	27.0	SW	.00	26	29.600	49.0	41.0	NW	.01	26	30.190	42.0	39.0	SE	.00
27	30.200	39.0	26.0	SW	.00	27	29.680	46.0	34.0	SW	.00	27	30.298	42.0	36.0	ENE	.00
28	30.112	40.0	30.0	SW	.00	28	29.260	56.0	41.0	NW	.00	28	30.200	54.0	34.0	SE	.00
29	29.966	45.0	31.0	NW	.00	29	29.266	55.0	46.0	W	.00	29	30.000	55.0	39.0	WNW	.00
30	29.920	51.0	33.0	SW	.00							30	29.978	49.0	44.0	SE	.00
31	30.175	50.0	40.0	SW	.00							31	29.439	48.0	42.0	S	.00
Mean Height of Barometer in Month, 30.262.						Mean Height of Barometer in Month, 29.654.						Mean Height of Barometer in Month, 30.094.					
Adopted Mean Temperature 37.5.						Adopted Mean Temperature 44.1.						Adopted Mean Temperature 43.8.					
Rainfall, 0.51.						Rainfall, 1.68.						Rainfall, 0.74.					

XVIII.

TABLE OF METEOROLOGICAL OBSERVATIONS

From April to June, 1880.

APRIL.						MAY.						JUNE.					
Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.
		Highest.	Lowest.					Highest.	Lowest.					Highest.	Lowest.		
1	29·313	48·0	41·0	NW	·91	1	30·175	61·0	40·0	NW	·00	1	30·360	63·0	47·0	NE	·01
2	29·415	54·0	39·0	SSE	·03	2	29·877	61·0	44·0	WNW	·00	2	30·277	57·0	49·0	NE	·00
3	29·332	62·0	44·0	SW	·08	3	29·775	48·0	42·0	NNE	·00	3	30·074	62·0	47·0	NE	·07
4	29·177	63·0	45·0	SW	·08	4	30·028	54·0	44·0	NE	·00	4	29·975	58·0	46·0	NNE	·01
5	29·139	61·0	41·0	SW	·09	5	30·100	60·0	42·0	NNE	·00	5	29·925	63·0	43·0	NE	·00
6	29·200	50·0	39·0	WSW	·00	6	30·050	54·0	41·0	NE	·00	6	29·692	68·0	49·0	NW	·05
7	29·430	46·0	41·0	NNE	·32	7	30·163	54·0	40·0	NNE	·00	7	29·500	61·0	43·0	WNW	·05
8	29·990	56·0	41·0	NE	·02	8	30·100	59·0	39·0	NE	·00	8	29·587	61·0	46·0	NW	·00
9	30·372	53·0	41·0	NE	·03	9	30·353	59·0	39·0	SE	·00	9	29·700	56·0	44·0	ESE	·00
10	30·310	55·0	40·0	NE	·00	10	30·100	53·0	38·0	NNE	·21	10	29·776	61·0	44·0	ESE	·31
11	30·087	59·0	42·0	SE	·02	11	30·084	53·0	42·0	NE	·05	11	29·996	61·0	48·0	SE	·00
12	30·016	49·0	40·0	NE	·00	12	30·200	59·0	43·0	E	·06	12	29·960	65·0	46·0	SE	·00
13	29·965	49·0	40·0	NE	·05	13	30·300	59·0	44·0	NE	·00	13	29·900	70·3	53·0	S	·00
14	29·758	56·0	37·0	NW	·24	14	30·290	59·0	44·0	NE	·00	14	30·075	58·0	53·0	NNW	·00
15	29·856	48·0	43·0	NE	·03	15	30·326	57·0	46·0	NE	·00	15	30·170	55·0	51·0	NNE	·00
16	29·636	55·0	40·0	NE	·31	16	30·290	59·0	43·0	NE	·00	16	30·170	62·0	50·0	NE	·37
17	29·760	62·0	42·0	SW	·06	17	30·335	67·0	40·0	SE	·00	17	30·300	65·0	52·0	NE	·00
18	29·867	64·0	43·0	SSW	·00	18	30·350	62·0	42·0	NE	·00	18	30·130	66·0	50·0	NNE	·00
19	29·694	65·0	43·0	SW	·00	19	30·090	66·0	46·0	WNW	·02	19	29·837	63·0	49·0	NE	·00
20	29·726	62·0	48·0	SW	·00	20	30·108	64·0	52·0	NE	·00	20	29·700	68·0	53·0	ENE	·20
21	29·653	58·0	46·0	SW	·00	21	30·120	70·0	50·0	NW	·00	21	29·600	70·0	54·0	NE	·00
22	29·587	64·0	44·0	SW	·00	22	29·610	68·0	53·0	NW	·00	22	30·390	60·0	53·0	NE	·00
23	29·860	63·0	43·0	W	·03	23	29·670	68·0	55·0	WNW	·03	23	29·700	61·0	53·0	NE	·00
24	29·800	56·0	46·0	NW	·03	24	29·488	65·0	49·0	WNW	·00	24	29·700	60·0	52·0	NE	·00
25	29·878	56·0	41·0	NNE	·00	25	29·920	69·0	45·0	WNW	·00	25	29·695	65·0	50·0	ENE	·00
26	30·069	51·0	38·0	NNE	·12	26	29·783	72·0	57·0	SW	·00	26	29·830	71·0	50·0	NNW	·00
27	30·276	56·0	39·0	NNE	·00	27	29·800	57·0	47·0	N	·61	27	30·030	76·0	53·0	WNW	·00
28	30·226	53·0	39·0	NNE	·00	28	30·048	62·0	45·0	WNW	·10	28	29·970	77·0	52·0	WSW	·00
29	30·427	60·0	41·0	NNE	·00	29	30·416	62·0	45·0	NE	·00	29	28·990	78·0	60·0	WNW	·00
30	30·480	61·0	40·0	NW	·00	30	30·240	72·0	49·0	SSW	·00	30	29·694	73·0	58·0	SW	·01
						31	30·104	60·0	44·6	SSW	·08						
Mean Height of Barometer in Month, 30·309.						Mean Height of Barometer in Month, 30·074.						Mean Height of Barometer in Month, 29·890.					
Adopted Mean Temperature 49·0.						Adopted Mean Temperature 52·9.						Adopted Mean Temperature 57·1.					
Rainfall, 2·45.						Rainfall, 1·16.						Rainfall, 1·08.					

TABLE OF METEOROLOGICAL OBSERVATIONS

From July to September, 1880.

JULY.						AUGUST.						SEPTEMBER.					
Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.
		Highest.	Lowest.					Highest.	Lowest.					Highest.	Lowest.		
1	29.475	72.0	57.0	WNW	02	1	29.554	71.0	51.0	NW	.00	1	30.088	72.0	58.0	W	.00
2	29.590	70.0	53.0	WNW	.00	2	29.610	64.0	55.0	NNE	.00	2	30.265	76.0	59.0	WNW	.00
3	29.540	66.0	54.0	WSW	.05	3	29.780	68.0	51.0	NW	.17	3	30.170	87.0	63.0	WNW	.00
4	29.888	66.0	53.0	NNE	.01	4	29.791	79.0	56.0	WSW	.00	4	29.990	81.0	60.0	WSW	.00
5	30.048	71.0	50.0	NW	.00	5	29.694	69.0	59.0	WSW	.00	5	29.886	83.0	66.0	SW	.00
6	29.817	70.0	58.0	SW	.00	6	29.590	68.0	58.0	SW	1.02	6	29.959	75.0	54.0	SW	.12
7	30.564	76.0	57.0	WSW	.04	7	29.437	66.0	53.0	NW	.09	7	29.900	75.0	54.0	NW	.00
8	29.456	65.0	52.0	SW	.07	8	29.497	78.0	59.0	NW	.03	8	30.079	71.0	51.0	NE	.00
9	29.597	66.0	53.0	SW	.14	9	29.900	73.0	51.0	NW	.06	9	29.965	71.0	46.0	SE	.00
10	29.748	70.0	53.0	SE	.08	10	30.182	79.0	54.0	NNW	.00	10	29.675	69.0	56.0	SE	.00
11	29.898	71.0	54.0	NW	.42	11	30.280	83.0	61.0	NE	.00	11	29.600	67.0	57.0	SSW	.64
12	30.082	67.0	54.0	SE	.03	12	30.320	78.0	58.0	NE	.00	12	29.529	69.0	54.0	NW	.59
13	30.108	59.0	55.0	NE	.25	13	30.230	70.0	59.0	NE	.00	13	29.480	63.0	53.0	NW	.64
14	30.152	60.0	55.0	NE	.23	14	30.259	69.0	56.0	NE	.00	14	29.600	57.0	49.0	SSE	.01
15	30.088	59.0	54.0	NE	.25	15	30.169	69.0	60.0	NNW	.00	15	29.270	59.0	53.0	NE	.85
16	30.095	61.0	54.0	NE	.34	16	30.145	63.0	56.0	NE	.02	16	29.710	60.0	55.0	NE	.52
17	30.017	63.0	55.0	NE	.00	17	30.238	62.0	53.0	NE	.00	17	29.790	69.0	50.0	NW	.01
18	29.800	70.0	56.0	NW	.09	18	30.243	67.0	56.0	NE	.00	18	29.500	64.0	52.0	NW	.08
19	29.900	60.0	56.0	NNE	.33	19	30.143	67.0	56.0	SE	.00	19	29.545	65.0	54.0	WNW	.00
20	30.050	64.0	53.0	NNE	.15	20	30.100	68.0	51.0	SE	.00	20	29.700	61.0	44.0	NW	.00
21	30.086	70.0	55.0	SE	.00	21	30.200	74.0	50.0	SSE	.00	21	29.760	63.0	47.0	WNW	.00
22	30.038	72.0	54.0	NE	.00	22	30.173	70.0	54.0	NNE	.00	22	29.750	61.0	50.0	SE	.47
23	29.970	67.0	58.0	SE	.00	23	30.134	66.0	56.0	NE	.10	23	29.070	59.0	52.0	SW	.60
24	29.790	69.0	58.0	WSW	.01	24	30.110	66.0	55.0	NE	.12	24	30.015	63.0	52.0	W	.01
25	29.797	74.0	58.0	NW	.05	25	30.092	71.0	55.0	SE	.00	25	29.980	64.0	55.0	SW	.00
26	29.644	63.0	55.0	SW	.06	26	30.008	62.0	57.0	ENE	.00	26	30.080	75.0	55.0	SW	.00
27	29.677	59.0	55.0	ESE	.47	27	30.115	70.0	59.0	NE	.10	27	30.260	77.0	51.0	SW	.00
28	29.519	66.0	54.0	SSW	.40	28	30.298	69.0	57.0	NE	.00	28	30.480	67.0	54.0	NW	.00
29	29.410	68.0	55.0	NW	.11	29	30.245	74.0	60.0	NE	.00	29	30.450	71.0	52.0	W	.00
30	29.470	75.0	51.0	NW	.00	30	30.070	74.0	59.0	SE	.00	30	30.330	65.0	53.0	NW	.00
31	29.610	72.0	51.0	NW	.00	31	30.025	74.0	60.0	NE	.00						
Mean Height of Barometer in Month, 29.836.						Mean Height of Barometer in Month, 30.210.						Mean Height of Barometer in Month, 30.195.					
Adopted Mean Temperature 60.8.						Adopted Mean Temperature 69.3.						Adopted Mean Temperature 61.1.					
Rainfall, 3.60.						Rainfall, 1.71.						Rainfall, 3.94.					

TABLE OF METEOROLOGICAL OBSERVATIONS

From October to December, 1880.

OCTOBER.						NOVEMBER.						DECEMBER.					
Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.	Date.	Barometer.	Thermo- meter.		Direction of Wind.	Rainfall.
		Highest.	Lowest.					Highest.	Lowest.					Highest.	Lowest.		
1	30·154	66·0	52·0	W	·00	1	30·158	47·0	44·0	NW	·00	1	29·895	56·0	46·0	SW	·00
2	29·856	50·0	47·0	NW	·12	2	30·220	43·0	31·0	WNW	·00	2	30·118	47·0	40·0	NW	·01
3	29·796	58·0	38·0	NW	·00	3	30·330	46·0	45·0	NW	·09	3	30·329	49·0	38·0	SW	·00
4	29·770	53·0	40·0	NNW	·00	4	30·360	54·0	45·0	WNW	·00	4	30·335	49·0	41·0	SW	·02
5	29·513	50·0	45·0	SE	·32	5	30·270	54·0	41·0	WNW	·00	5	30·334	53·0	43·0	SW	·11
6	29·420	53·0	46·0	NNE	·57	6	30·239	55·6	44·0	WSW	·00	6	30·260	54·0	48·0	SW	·08
7	29·720	54·0	49·0	NE	·05	7	29·934	55·0	49·0	WSW	·00	7	30·500	52·0	43·0	SW	·00
8	29·857	55·0	49·0	NE	·12	8	30·286	44·0	39·0	NNW	·01	8	30·375	52·0	43·0	WNW	·00
9	30·008	54·0	48·0	ESE	·13	9	30·008	50·0	31·0	SW	·00	9	30·200	52·0	46·0	NW	·00
10	30·222	60·0	49·0	ENE	·01	10	29·999	52·0	39·0	NNW	·00	10	30·100	51·0	47·0	WNW	·00
11	30·385	54·0	46·0	NE	·00	11	29·866	55·0	43·0	SW	·04	11	29·018	51·0	43·0	WSW	·00
12	30·330	55·0	47·0	NE	·00	12	29·825	60·0	43·0	WSW	·01	12	29·845	48·0	43·0	WNW	·00
13	30·300	54·0	47·0	NNW	·00	13	29·295	60·0	49·0	SW	·01	13	29·730	46·0	42·0	NW	·14
14	30·330	56·0	45·0	NW	·00	14	29·070	56·0	54·0	SW	·03	14	29·780	40·0	32·0	NW	·00
15	30·250	55·0	49·0	W	·00	15	29·660	43·0	30·0	NW	·30	15	29·495	41·0	31·0	SW	·13
16	30·060	54·0	49·0	NW	·00	16	28·575	43·0	34·0	SE	·47	16	29·585	41·0	33·0	ENE	·21
17	30·070	63·0	47·0	NW	·00	17	29·030	43·0	35·0	NNW	·42	17	29·859	35·0	30·0	NW	·02
18	29·880	59·0	47·0	NW	·00	18	29·190	43·0	34·0	NNW	·14	18	29·438	35·0	29·0	SW	·00
19	30·060	45·0	35·0	NW	·15	19	29·450	43·0	34·0	NE	·07	19	29·120	40·0	32·0	WSW	·06
20	29·770	42·0	31·0	NW	·20	20	30·310	36·0	31·0	NNW	·31	20	29·375	40·0	32·0	SW	·00
21	29·845	45·0	32·0	NW	·26	21	30·480	34·0	22·0	NW	·01	21	29·900	39·0	35·0	SW	·00
22	29·863	46·0	31·0	NW	·11	22	29·955	35·0	25·0	NNW	·18	22	29·785	44·0	32·0	WSW	·00
23	30·000	43·0	39·0	NE	·03	23	29·680	40·0	27·0	SSW	·01	23	29·260	49·0	34·0	NW	·70
24	30·177	52·0	36·0	NW	·02	24	29·576	50·0	34·0	SW	·00	24	28·970	45·0	41·0	WSW	·13
25	29·960	50·0	42·0	WNW	·00	25	29·269	53·0	44·0	SW	·08	25	29·300	36·0	32·0	NW	·01
26	29·700	44·0	41·0	NE	·20	26	29·215	52·0	43·0	SW	·11	26	29·475	38·0	31·0	NW	·00
27	29·520	45·0	40·0	ENE	·05	27	29·773	53·0	43·0	SW	·01	27	29·415	39·0	29·0	NW	·00
28	28·930	43·0	39·0	NE	1·25	28	30·040	53·0	44·0	SW	·00	28	29·400	40·0	30·0	NE	·55
29	29·594	47·0	43·0	NNE	·67	29	30·165	52·0	49·0	SW	·00	29	29·400	40·0	36·0	NE	·21
30	30·055	50·0	45·0	WNW	·00	30	30·226	51·0	45·0	SW	·00	30	29·248	37·0	34·0	NW	1·08
31	29·846	55·0	42·0	WNW	·00							31	30·000	42·0	30·0	NW	·00
Mean Height of Barometer in Month, 29·911.						Mean Height of Barometer in Month, 29·848.						Mean Height of Barometer in Month, 29·736.					
Adopted Mean Temperature 47·5.						Adopted Mean Temperature 43·7.						Adopted Mean Temperature 40·7.					
Rainfall, 4·26.						Rainfall, 2·10.						Rainfall, 3·46.					

XXI.

Case in which Premises were visited by the Medical Officer of Health and Sanitary Inspectors, on account of Infectious Diseases prevailing therein.

Diseases.	No. of Cases.	Bedding and Articles of Clothing Burned to prevent Contagion, and Houses Disinfected.	No.
Smallpox	1	Flock and Chaff Beds	9
Typhus Fever.....	21	Mattresses	2
Typhoid ,, ...	35	Pillows, &c.....	8
Other ,, ...	16	Sheets, &c.	5
Scarlatina	792	Houses Disinfected by the Inspector	89
Measles	279		
Diphtheria	6		
Whooping Cough	138		
Croup	18		
Diarrhoea.....	198		
Total	1504	Total	113

List of Cases in which it was found necessary to adopt Magisterial proceedings.

Particulars of Complaint.	No. of Cases.	How Disposed of.	Penalties Imposed.
			£ s. d.
Borough Bye-Laws	10	2 fined 10s. ; 1 fined 5s. ; 3 fined 2s. 6d. ; 3 pay costs ; 1 dismissed	1 2 6
Ash-pits, Privies, Water-closets, Spouts, and Premises in such a state as to be a Nuisance and Injurious to Health	16	2 orders to abate made, 14 cases withdrawn on payment of costs.....	
Exposing Unsound Food for Sale.....	3	2 fined 5s. ; 1 dismissed..	0 10 0
Adulteration of Food	7	2 fined 20s. ; 2 fined 5s. ; 1 fined £5 ; 2 withdrawn	7 10 0
	36		£9 2 6

Number of Persons summoned under the Sanitary Acts.

Sanitary Acts.	Number of Persons.	Convicted.	Dis-charged.	Nuisances abated and Summonses withdrawn on payment of Costs.
Public Health Act	16	..	..	14
Selling and Exposing for Sale Unsound Food	3	2	1	..
Adulteration of Food Act	7	5	2	..
Bye-Laws.....	10	9	1	..
Total	36	16	4	14

Table shewing the amount of Bad Meat and other unwholesome Articles of Food seized and destroyed during 1880.

Class of Food Seized.	No. of Seizures.	Weight in Pounds Seized and Destroyed.	No of Persons Summoned.	No. of Convictions.	Amount of Penalties Imposed.
Beef and Mutton	13	3,204 lbs.	2	1	5s. 0d.
Ham and Bacon.....	2	800 lbs.	..	..	..
Oysters.....	2	1,223 hundreds.	..	..	..
Fish	3	176 lbs.	1	1	5s. 0d.
Mussels.....	1	660 lbs.	..	..	..
Sour Milk	2	33 Galls.	..	..	..
Total	21		3	2	10s.

XXIII.

*Nuisances reported and Notices served by Sanitary
Inspectors during the Year.*

Number of Nuisances reported	2,238
Nuisance abated without formal Notice	186
Nuisances abated after Notice without proceedings	1,963
Nuisances abated after proceedings had been taken	89
Number of formal Notices given.....	4,262
Complaints made at Office, and attended to by Inspectors	390
Order of Magistrates to abate Nuisances	2

Notices served.

To Repair Defective House Drains, Roofs, Water-closets, Ash-pits, &c.	1,525
To White-wash Premises, Cleanse Rooms, Yards, Out- houses, &c.	2,638
Defective Spouts.....	79
Close Cellar Dwellings, and abate overcrowding.....	18
To abate Smoke Nuisances	2
To Cleanse and Disinfect Houses wherein Zymotic Diseases had occurred	739
Total.....	5,001

Ash-pits Cleansed by Corporation.

Orders taken by Inspectors during inspection, and Private Orders received at the Office..... 6,987 Total..... 6,987	No. of Loads removed during 1880 45,747 Total 45,747
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J. HUNTLEY, PRINTER, NILE STREET, SUNDERLAND

Deaths Registered in the Borough of Sunderland during the Year ending December 31st, 1880.

[illegible]

BOROUGH OF SUNDERLAND
IMPROVEMENTS & NEW STREETS.
TOWNSHIP OF BISHOPWEARMOUTH

AREAS B² C² D² E² F² G² H² J² K²



BOROUGH OF SUNDERLAND IMPROVEMENTS & NEW STREETS.

PARISH OF SUNDERLAND & TOWNSHIP OF BISHOPWEARMOUTH

AREAS C. D. E. F. G. H. J. K. L. M. N. O. P.

Q. R. S. S² & A²



SCALE OF FEET
500 400 300 200 100 0 500 1000

BOROUGH OF SUNDERLAND IMPROVEMENTS & NEW STREETS.

TOWNSHIP OF MONKWEARMOUTH.

AREAS T. U. V. W. X. Y. & Z.



